

LBT-V701/V701CD/V701CDG

SERVICE MANUAL

AEP Model

E Model

LBT-V701

UK Model

LBT-V701CD/V701CDG

- LBT-V701/701CD/701CDG are composed of following models.

As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR LBT-V701/V701CD/V701CDG

| | V701 (AEP, WG, IT) | V701 (E, SaudiArabia) | V701CD | V701CDG |
|----------------------|-----------------------|--------------------------|----------|----------|
| AMPLIFIER | TA-V701 | TA-V701 | TA-V701 | TA-V701 |
| CASSETTE DECK | TC-V701 | TC-V701 | TC-V701 | TC-V701 |
| TUNER | ST-V701L | ST-V701S | ST-V701L | ST-V701L |
| GRAPHIC EQUALIZER | — | SEQ-V901 | — | SEQ-V901 |
| CD PLAYER | — | — | CDP-M77 | CDP-M77 |
| TURNTABLE SYSTEM | — | — | PS-V701P | PS-V701P |

SPECIFICATIONS

General

Power requirements LBT-V701 (AEP, WG, IT model): 220V AC, 50Hz

LBT-V701 (E, SaudiArabia model): 120, 220 or 240V.
adjustable. 50/60Hz

LBT-V701CD/V701CDG: 240V. 50/60Hz

Power consumption LBT-V701 (AEP, WG, IT model): 110W
LBT-V701 (E, SaudiArabia model): 140W
LBT-V701CD/V701CDG: 240W

AC outlet LBT-V701 (AEP, WG, IT model): 2 unswitched, total 100W max.

LBT-V701 (E, SaudiArabia model): 2 switched, total 100W max.

LBT-V701CD/V701CDG: 1 unswitched, 100W max.

PARTS LIST

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

| Part No. | Description |
|---------------|---|
| 1-465-163-11 | (E).....REMOTE COMMANDER (RM-S720E) |
| 1-465-164-11 | (AEP,IT,WG)...REMOTE COMMANDER (RM-S720) |
| 1-501-369-11 | (AEP,IT,WG,UK)...ANTENNA |
| 1-501-374-01 | (AEP,IT,E,UK)...ANTENNA, LOOP |
| 1-558-543-00 | (E,UK)...CORD, CONNECTION |
| 1-559-552-41 | CORD (WITH CONNECTOR) 5P-11P-11P |
| 1-574-803-11 | CORD (WITH CONNECTOR) 11P-15P-15P |
| *3-570-115-01 | CUSHION (for TC) |
| 3-701-806-00 | (UK)...ADAPTOR, 45, (E) |
| 3-750-266-11 | (AEP,E,UK).....MANUAL, INSTRUCTION (LBT-V701) |
| 3-750-266-41 | (AEP,IT,WG).....MANUAL, INSTRUCTION (LBT-V701) |
| 3-750-267-11 | (E,UK:V701CDG)...MANUAL, INSTRUCTION (SEQ-V901) |
| 3-786-618-11 | (UK).....MANUAL, INSTRUCTION (CDP-M77) |
| 4-914-075-01 | CUSHION (SP) |
| 4-920-940-01 | SHEET (A), PROTECTION (for TA,TC) |
| *4-922-998-01 | (E,UK)...CUSHION (for SEQ,CDP) |
| *4-928-405-01 | CUSHION (for TA) |
| *4-928-406-01 | CUSHION (for TC) |
| *4-930-828-01 | (UK:V701CD)....INDIVIDUAL CARTON |
| *4-930-829-01 | (E).....INDIVIDUAL CARTON |
| *4-930-830-01 | (AEP,IT,WG)....INDIVIDUAL CARTON |
| *4-930-834-01 | (UK:V701CDG)...INDIVIDUAL CARTON |

- WG: West Germany
IT : Italian



9-953-787-11

Sony Corporation
Audio Group

COMPACT STEREO SYSTEM

SONY®

English
89D0454-1
Printed in Japan
©1989.4

Published by A/V Engineering Service Dept.

TA-V701

SERVICE MANUAL

AEP Model
UK Model
E Model

This set is the stereo
amplifier section in
LBT-V701/V701CD/V701CDG.



SPECIFICATIONS

Amplifier (TA-V701)

Continuous RMS power output (AEP, UK, West Germany, Italian model)

60 W + 60 W (at 1 kHz, 5% T.H.D.)

Peak music power output: 600 W (E, Saudi Arabia model)

Inputs

| | Jack type | Sensitivity | Impedance |
|--------------|-----------|-------------|-----------|
| PHONO IN | Phono | 3 mV | 50 kohms |
| VIDEO/DAT IN | Phono | 200 mV | 50 kohms |
| CD IN | Phono | 200 mV | 50 kohms |
| TAPE IN | Phone | 200 mV | 50 kohms |
| MIC | Phone | 1 mV | 10 kohms |

Outputs

| | Jack type | Voltage | Impedance |
|------------------|--------------|--|-----------|
| VIDEO/DAT | Phono | 200 mV | 470 ohms |
| SURROUND SPEAKER | Phono | Accepts speakers of 6 ohms to 16 ohms. | |
| HEADPHONES | Stereo phone | Accepts headphones of 8 ohms or more. | |

General

Power requirement (AEP, West Germany, Italian model) : 220V AC, 50Hz

(E, Saudi Arabia model) : 120, 220 or 240V, adjustable, 50/60Hz

(UK model) : 240V, 50/60Hz

Power consumption (AEP, West Germany, Italian model) : 110W

(E, Saudi Arabia model) : 140W

(UK model) : 240W

AC outlet (AEP, West Germany, Italian model) : 2 unswitched, total 100W max.

(E, Saudi Arabia model) : 2 switched, total 100W max.

(UK model) : 1 unswitched, 100W max.

Accessories supplied

Remote commander (1)

Batteries Sony SUM-3 (NS) (2)

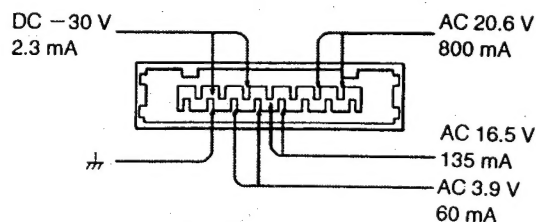
AM loop antenna (1)

FM wire antenna (Except for West Germany model) (1)

45-rpm adaptor (1)

SYSTEM CONTROL connector

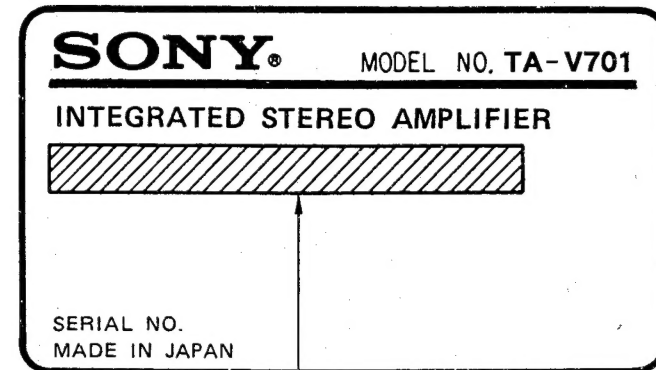
SYSTEM CONTROL 2: 15-pin



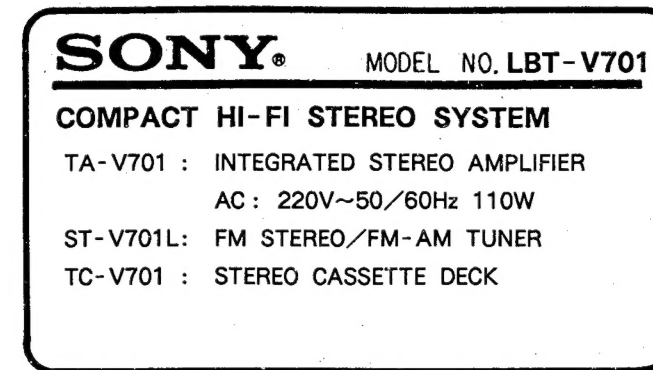
STEREO AMPLIFIER
SONY

MODEL IDENTIFICATION

— Specification Label —



West Germany Model :



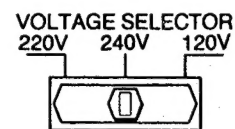
AEP Model : AC : 220V~50/60Hz
 Italian Model : AC : 220V~50/60Hz 110W
 UK Model : AC : 220V~50/60Hz
 E, Saudi Arabia Model : AC : 120/220/240V~50/60Hz 140W

SERVICING NOTES

On operating voltage

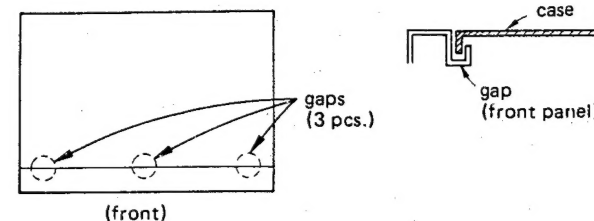
Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

| Where purchased | Operating voltage |
|------------------------------------|---|
| AEP, West Germany Italian Model | 220 V AC |
| UK Model | 240 V AC |
| E, Saudi Arabia Model | 120, 220 or 240 V AC, adjustable with the voltage selector on the rear. |



On removing the case

Remove the case by lifting it up straightly above.
 Unbalanced lifting damages gaps of the front panel assembly for supporting the case.

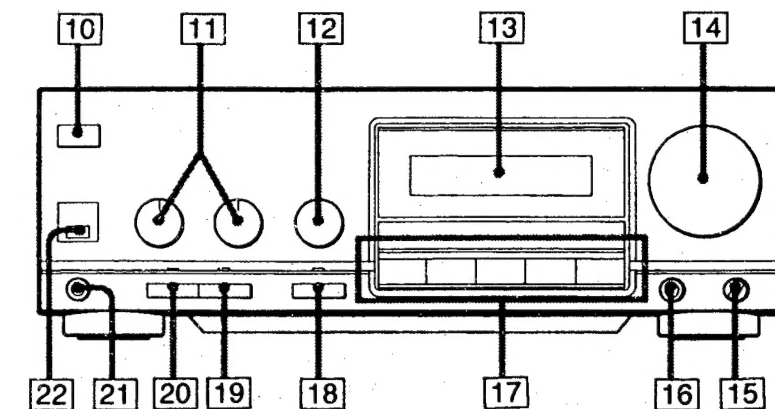


SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

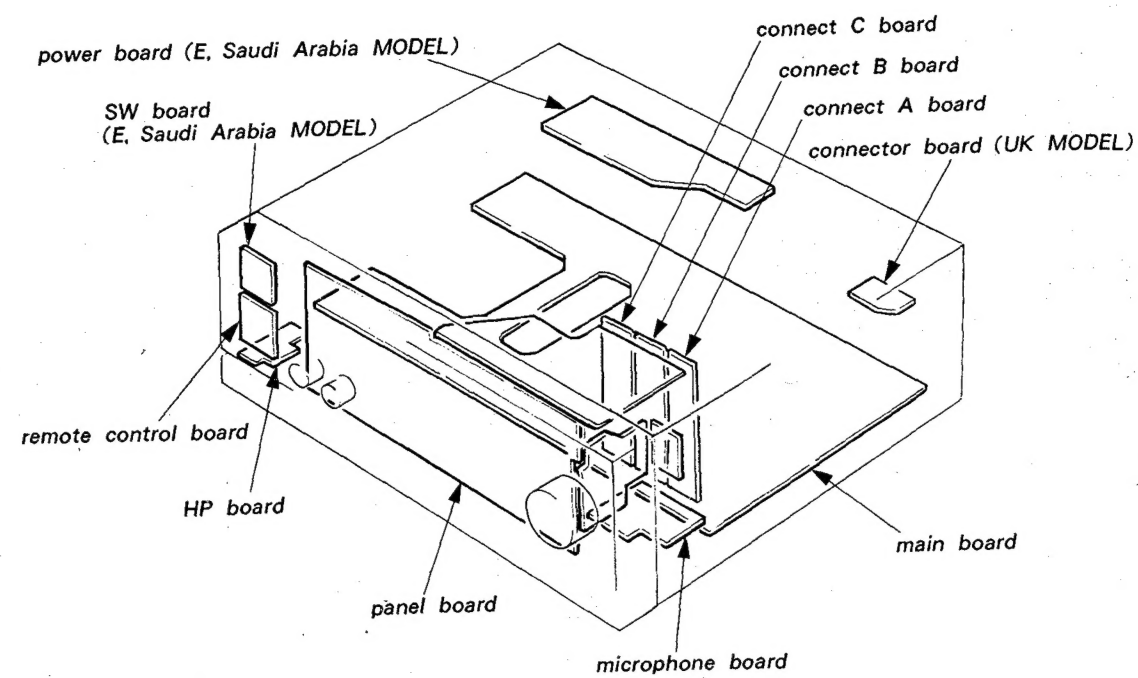
PARTS IDENTIFICATION



- 10 POWER switch (AEP, UK, West Germany, Italian model)
SYSTEM POWER switch (E, Saudi Arabia model)
- 11 Tone controls (BASS and TREBLE)
- 12 BALANCE control
- 13 Function display
- 14 VOLUME control
- 15 MIC (microphone) LEVEL control
- 16 MIC (microphone) jack
- 17 FUNCTION CONTROL buttons
- 18 EQ REC (equalizer recording) switch
- 19 SURROUND button
- 20 DBFB (Dynamic Bass FeedBack) button (AEP, UK, West Germany, Italian model)
SAT (Super Acoustic Turbo) button (E, Saudi Arabia model)
- 21 HEADPHONES jack
- 22 Remote control sensor

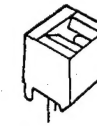
SECTION 2 DIAGRAMS

2-1. PC BOARD LOCATION

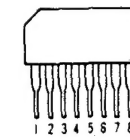


2-2. SEMICONDUCTOR LEAD LAYOUTS

GP1U52XB



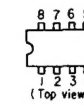
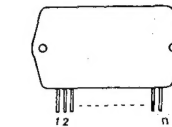
M5218L

 μ PC1237HA

2SK246BL

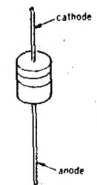


LB1639

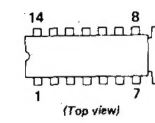
 μ PC4570CSTK4152 II
STK4192 II

HZS6B1L

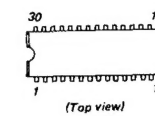
UZL-27M



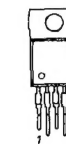
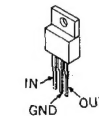
LC4066BH



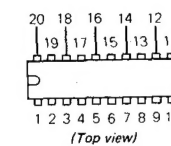
LC7818



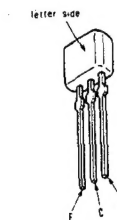
L78MR05

M5F7810
M5F7812

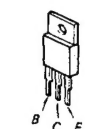
M50721-127P



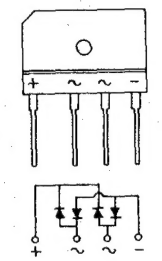
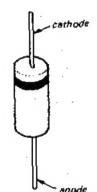
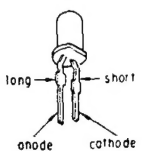
2SA1317



2SB1187F

2SC1841
2SC3622AL

RBV-602-11

RD5.1FB2
US1060M
10E2NSEL1222R-C
SEL2410E-D
SEL4225RM-D
SEL4825WMCD

2-3. PRINTED WIRING BOARDS

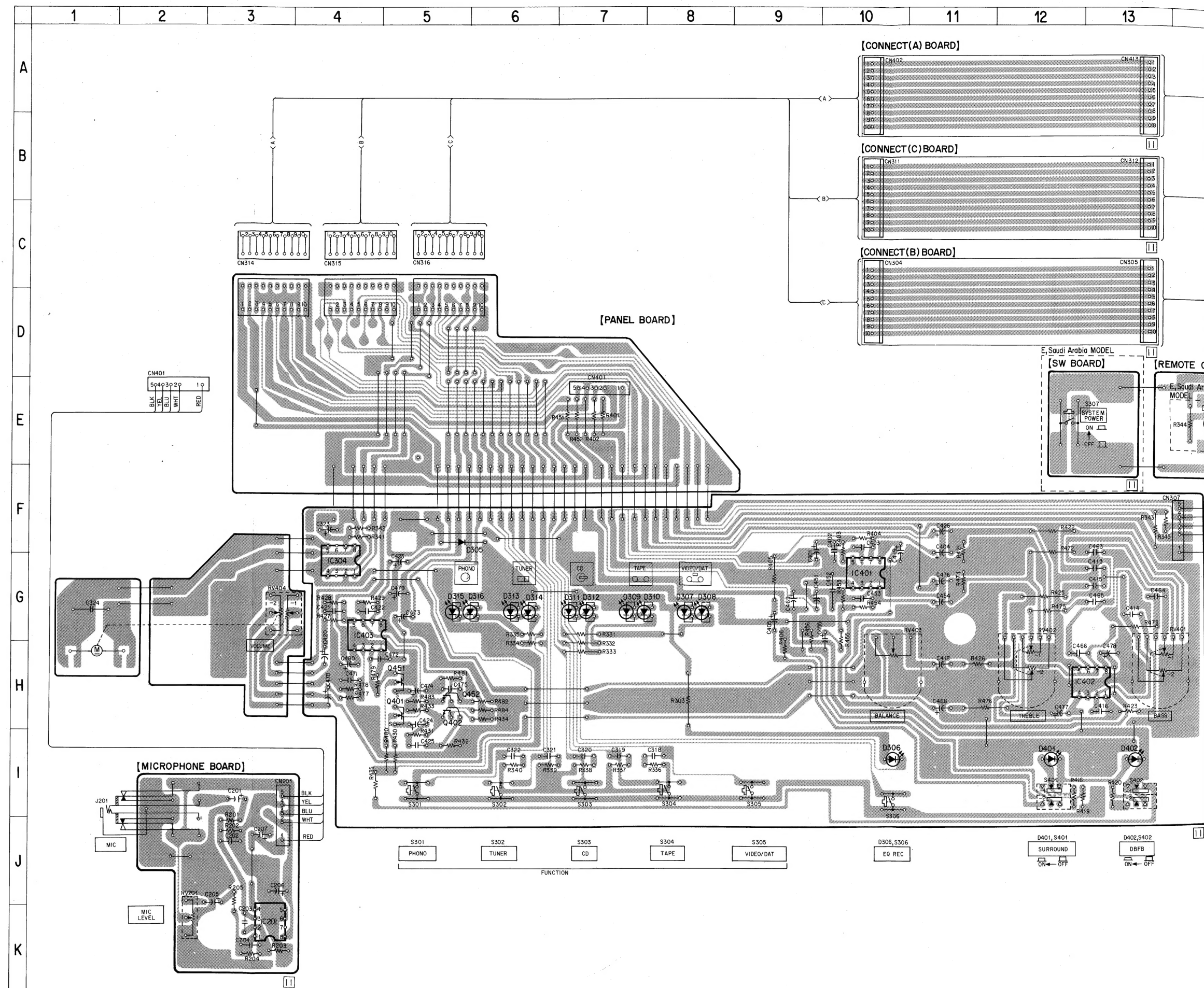
● See page 5 for Semiconductor Lead Layouts.

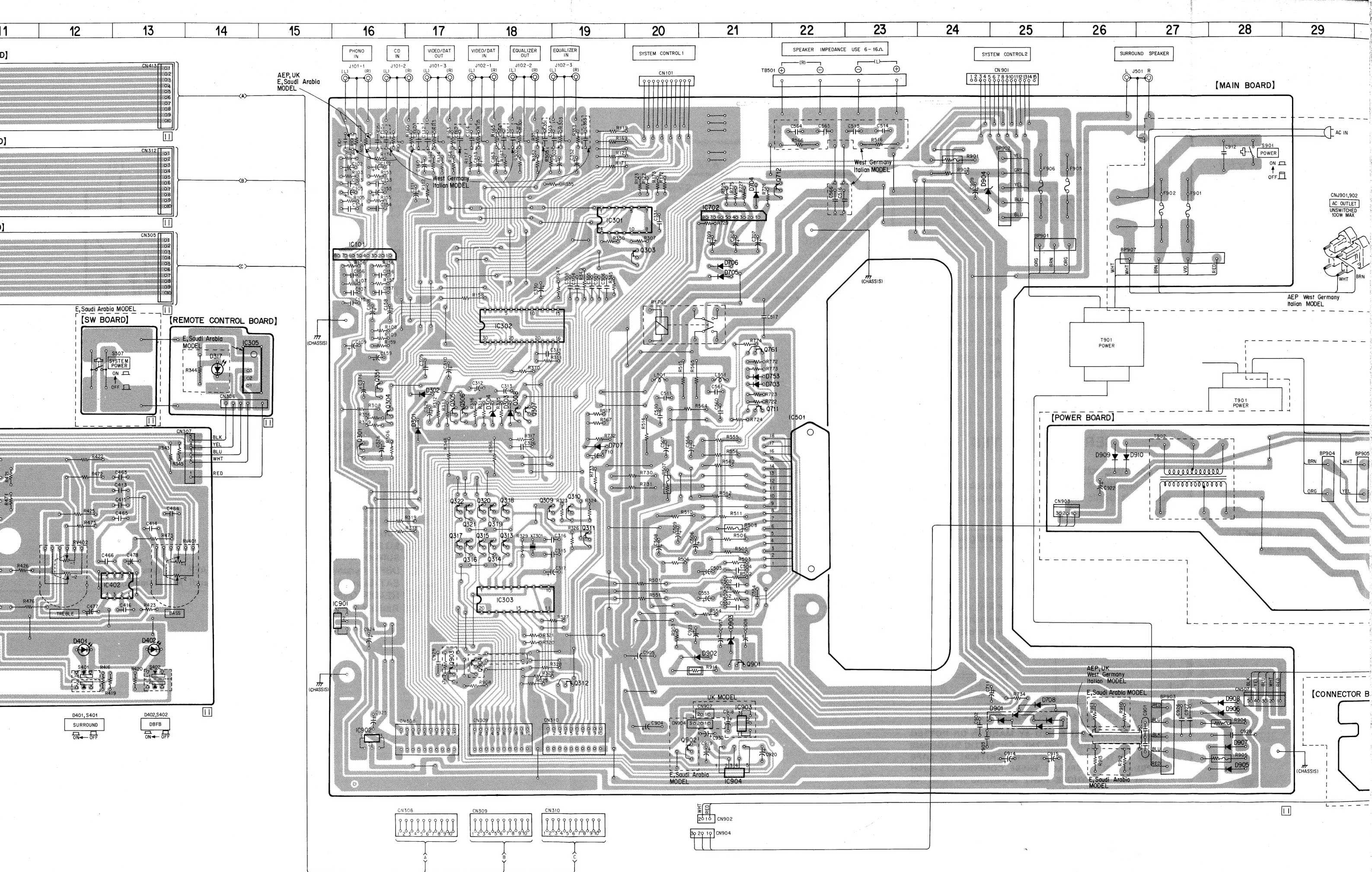
● Semiconductor Location

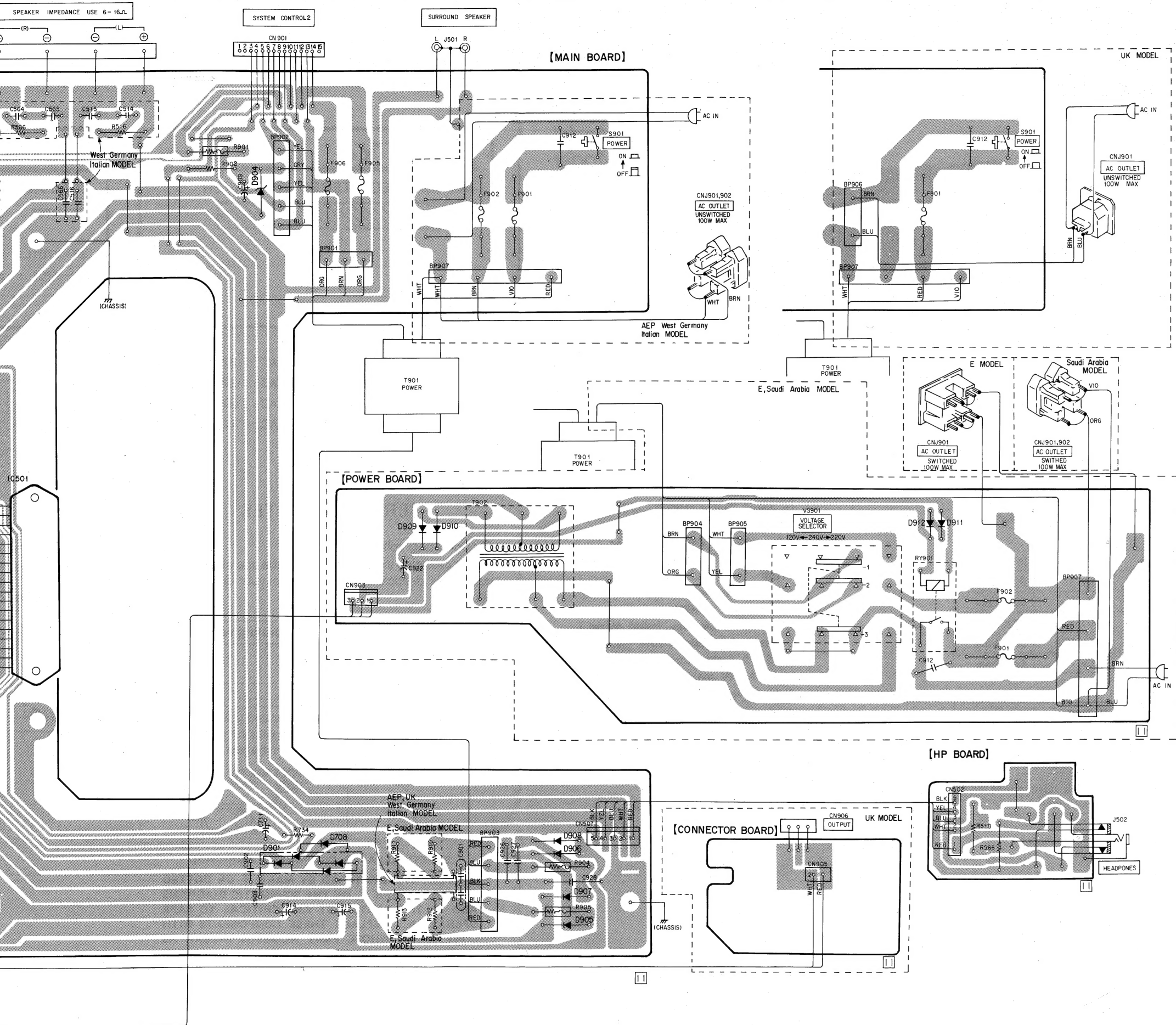
| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D301 | F-17 | IC305 | E-14 |
| D302 | E-17 | IC401 | G-10 |
| D303 | F-18 | IC402 | H-13 |
| D304 | F-18 | IC403 | G-4 |
| D305 | F-5 | IC501 | G-22 |
| D306 | I-10 | IC702 | C-21 |
| D307 | G-8 | IC901 | H-16 |
| D308 | G-8 | IC902 | J-16 |
| D309 | G-7 | IC903 | J-21 |
| D310 | G-8 | IC904 | J-21 |
| D311 | G-7 | | |
| D312 | G-7 | Q301 | F-16 |
| D313 | G-6 | Q303 | C-20 |
| D314 | G-6 | Q304 | F-16 |
| D315 | G-5 | Q305 | F-17 |
| D316 | G-6 | Q306 | F-17 |
| D317 | E-14 | Q307 | F-18 |
| D401 | I-12 | Q308 | F-18 |
| D402 | I-13 | Q309 | G-19 |
| D703 | E-21 | Q310 | G-19 |
| D704 | C-21 | Q311 | G-19 |
| D705 | C-21 | Q312 | I-19 |
| D706 | C-21 | Q313 | G-18 |
| D707 | F-19 | Q314 | G-18 |
| D708 | J-25 | Q315 | G-18 |
| D753 | E-21 | Q316 | G-17 |
| D901 | J-25 | Q317 | G-17 |
| D902 | I-20 | Q318 | G-18 |
| D903 | I-21 | Q319 | G-18 |
| D904 | C-24 | Q320 | G-18 |
| D905 | J-28 | Q321 | G-17 |
| D906 | J-28 | Q322 | G-17 |
| D907 | J-28 | Q351 | E-16 |
| D908 | J-28 | Q401 | H-5 |
| D909 | F-26 | Q402 | H-5 |
| D910 | F-26 | Q451 | H-5 |
| D911 | F-32 | Q711 | F-21 |
| D912 | F-32 | Q712 | C-22 |
| IC101 | C-16 | Q761 | E-21 |
| IC201 | K-3 | Q901 | I-21 |
| IC301 | C-19 | Q902 | J-20 |
| IC302 | D-18 | Q903 | I-17 |
| IC303 | H-18 | Q904 | I-17 |
| IC304 | G-4 | | |

Note:

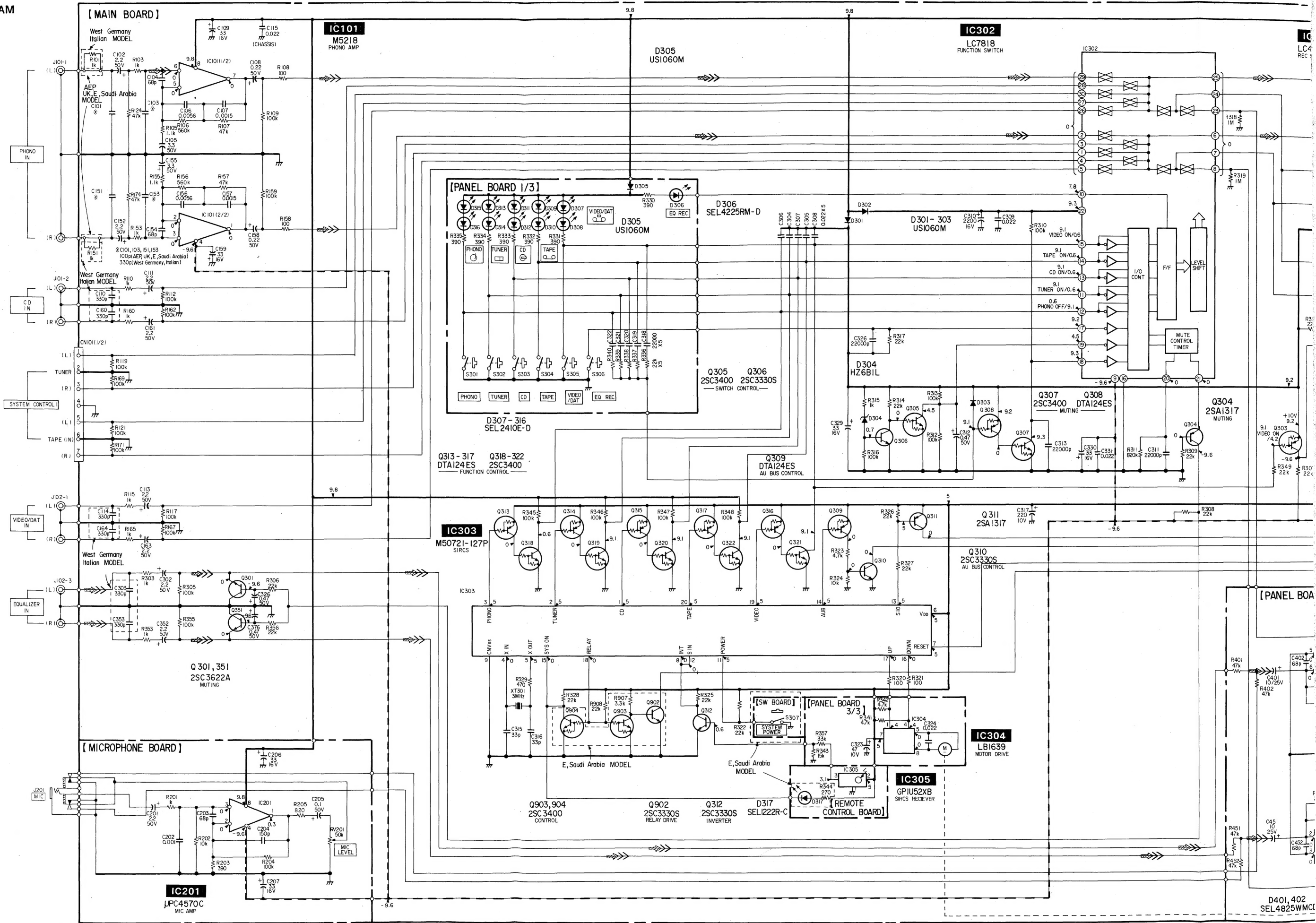
● ○ : parts extracted from the component side.

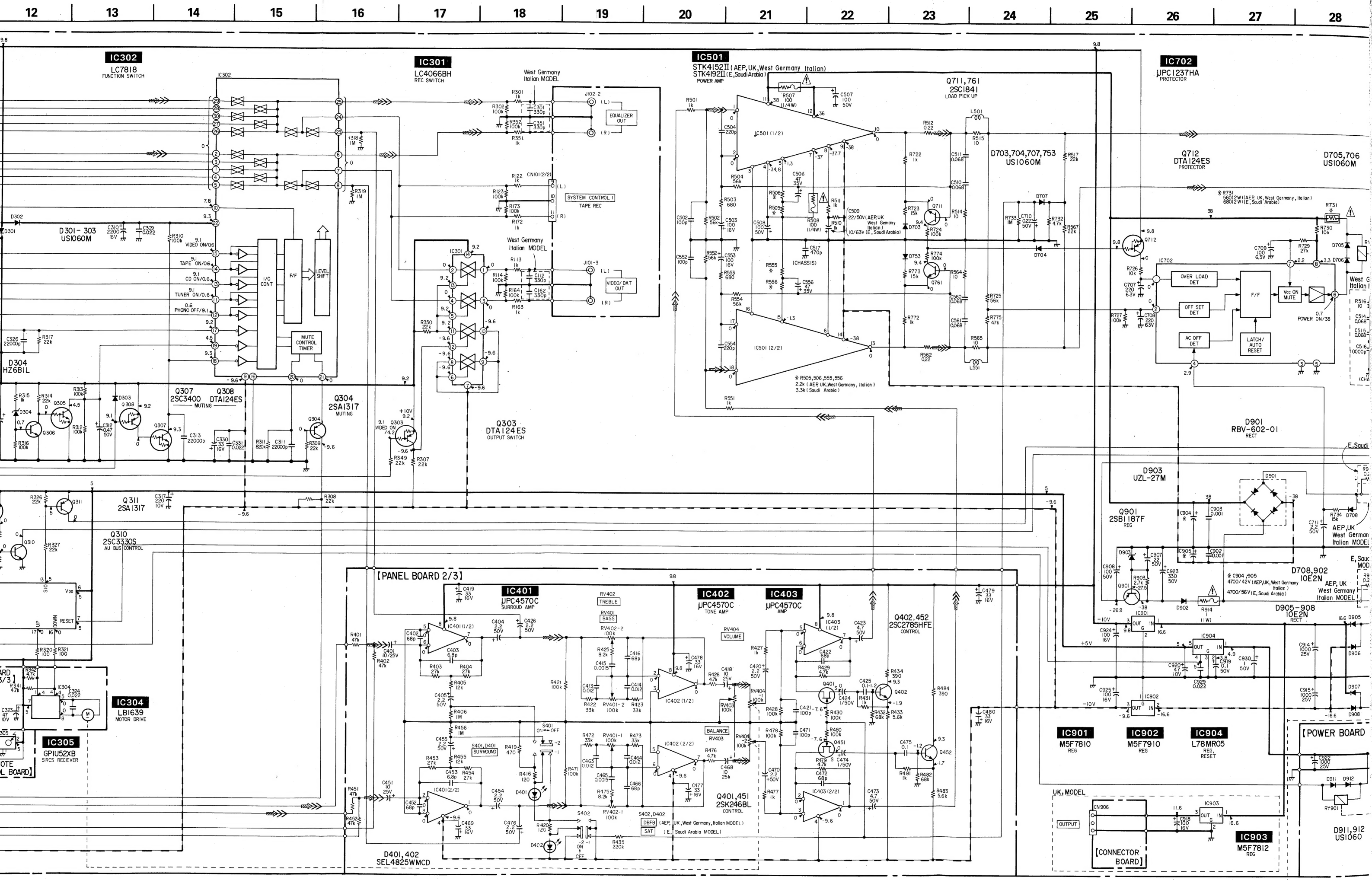






2-4. SCHEMATIC DIAGRAM







SECTION 3 EXPLODED VIEWS

NOTE:

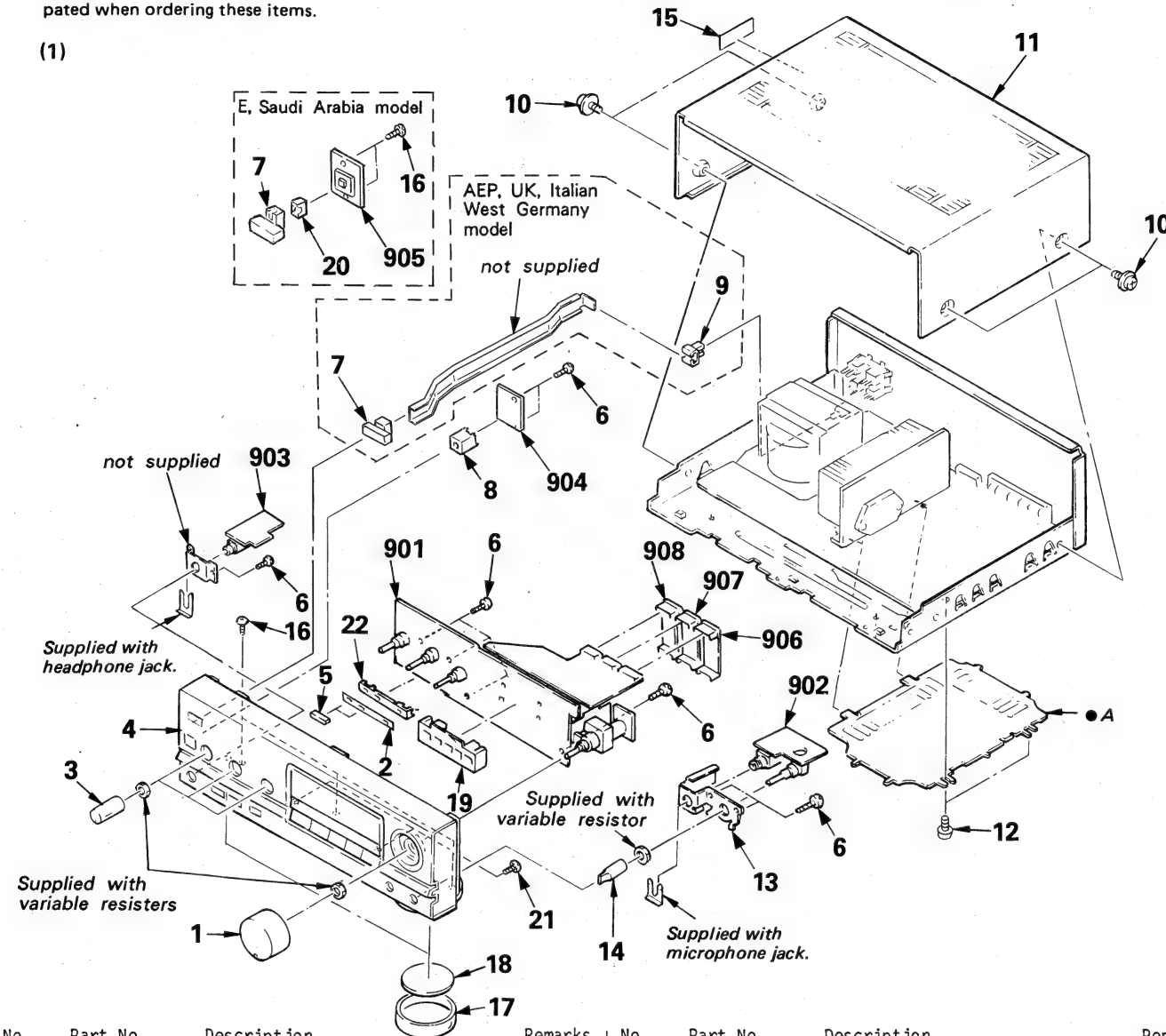
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

- WG : West Germany
IT : Italian

(1)





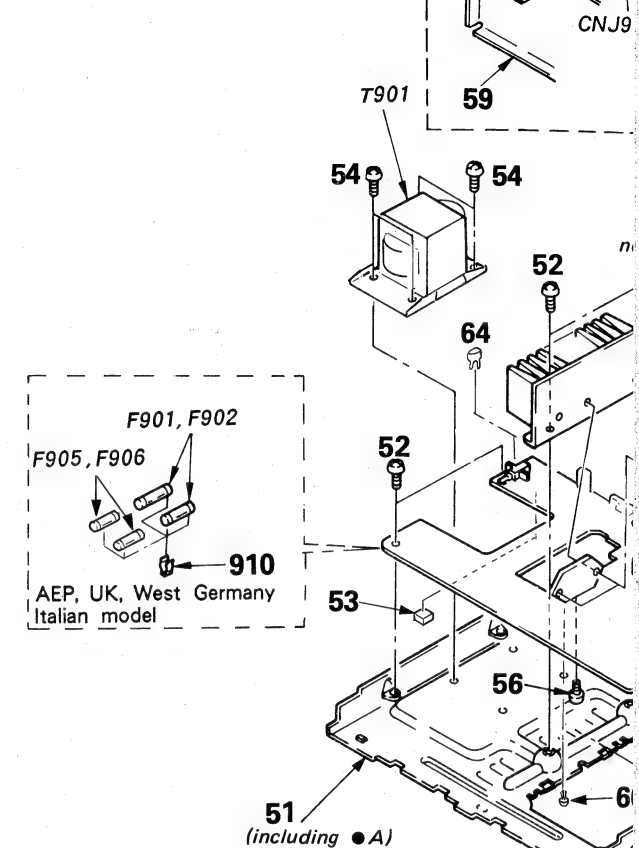
| No. | Part No. | Description | Remarks |
|-----|---------------|--------------------------------------|---------|
| 1 | 4-925-121-42 | KNOB (V2) | |
| 2 | *4-928-410-01 | PLATE, LIGHT INTERCEPTION | |
| 3 | 4-925-188-01 | KNOB (TONE) | |
| 4 | X-4917-267-1 | (AEP,UK,WG,IT)....PANEL ASSY, FRONT | |
| | X-4917-268-1 | (E,Saudi Arabia)...PANEL ASSY, FRONT | |
| 5 | 4-928-490-01 | BUTTON | |
| 6 | 4-928-635-01 | SCREW, +BV (2.6X8) TAPPING | |
| 7 | 4-921-919-01 | (AEP,UK,WG,IT)....BUTTON (POWER) | |
| | 4-921-919-11 | (E,Saudi Arabia)...BUTTON (POWER) | |
| 8 | *4-925-182-01 | (E,Saudi Arabia)...HOLDER (W), LED | |
| 9 | 4-866-342-00 | (AEP,UK,WG,IT)....JOINT (B), KNOB | |
| 10 | 3-704-366-01 | SCREW (CASE) (M3X8) | |
| 11 | 4-919-378-31 | CASE | |
| 12 | 7-682-548-04 | SCREW +BVTP 3X8 (S) | |

| No. | Part No. | Description | Remarks |
|-----|---------------|--|---------|
| 13 | *4-928-413-01 | BRACKET (MIC) | |
| 14 | 4-921-921-01 | KNOB (M) | |
| 15 | *3-703-079-21 | (UK)...LABEL CAUTION (BACK) | |
| 16 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| 17 | X-4917-252-1 | PLATE (LEG) ASSY, ORNAMENTAL | |
| 18 | 4-928-401-01 | FELT | |
| 19 | *4-928-496-01 | HOLDER (F), LED | |
| 20 | *4-881-725-00 | (E,Saudi Arabia)...RING (TACT), FLEXIBLE | |
| 21 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S | |
| 22 | *4-925-193-01 | HOLDER (D), LED | |
| 901 | *A-4333-217-A | MOUNTED PCB, PANEL | |
| 902 | *1-631-084-11 | PC BOARD, MICROPHONE | |
| 903 | *1-631-090-11 | PC BOARD, HP | |
| 904 | *1-631-085-11 | PC BOARD, REMOTE CONTROL | |
| 905 | *1-631-086-11 | (E,Saudi Arabia)...PC BOARD, SW | |

-17-

(2)

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



| No. | Part No. | Description | Remarks |
|-----|---------------|---|---------|
| 51 | *X-4917-246-1 | CHASSIS ASSY | |
| 52 | 7-682-548-04 | SCREW +BVTT 3X8 (S) | |
| 53 | 9-911-843-XX | RUBBER, CUSHION | |
| 54 | 7-682-560-04 | SCREW +BVTT 4X6 (S) | |
| 55 | 3-703-571-11 | (E)...BUSHING (S) (4516), CORD | |
| | *3-703-244-00 | (AEP,UK,WG,Saudi Arabia,IT) ...BUSHING (2104), CORD | |
| 56 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| 57 | 3-706-165-00 | SCREW | |
| 58 | 7-621-849-00 | SCREW, TAPPING | |
| 59 | *4-928-482-11 | (AEP).....PANEL, BACK | |
| | *4-928-482-21 | (UK).....PANEL, BACK | |
| | *4-928-482-31 | (E).....PANEL, BACK | |
| | *4-928-482-41 | (WG).....PANEL, BACK | |
| | *4-928-482-51 | (Saudi Arabia)...PANEL, BACK | |
| | *4-928-482-61 | (IT).....PANEL, BACK | |
| 60 | 4-917-239-01 | RIVET, NYLON | |
| 61 | X-4917-254-1 | FOOT ASSY | |
| 62 | 3-703-685-21 | SCREW (+BV 3X8) | |
| 63 | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 IT-3 | |
| 64 | *4-875-455-31 | (AEP,UK,WG,IT)...COVER(DIA.20), CAPACIT | |
| 65 | 4-870-539-00 | PLATE, GROUND | |
| 906 | *1-631-091-11 | PC BOARD, CONNECT (A) | |
| 907 | *1-631-092-11 | PC BOARD, CONNECT (B) | |
| 908 | *1-631-093-11 | PC BOARD, CONNECT (C) | |

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

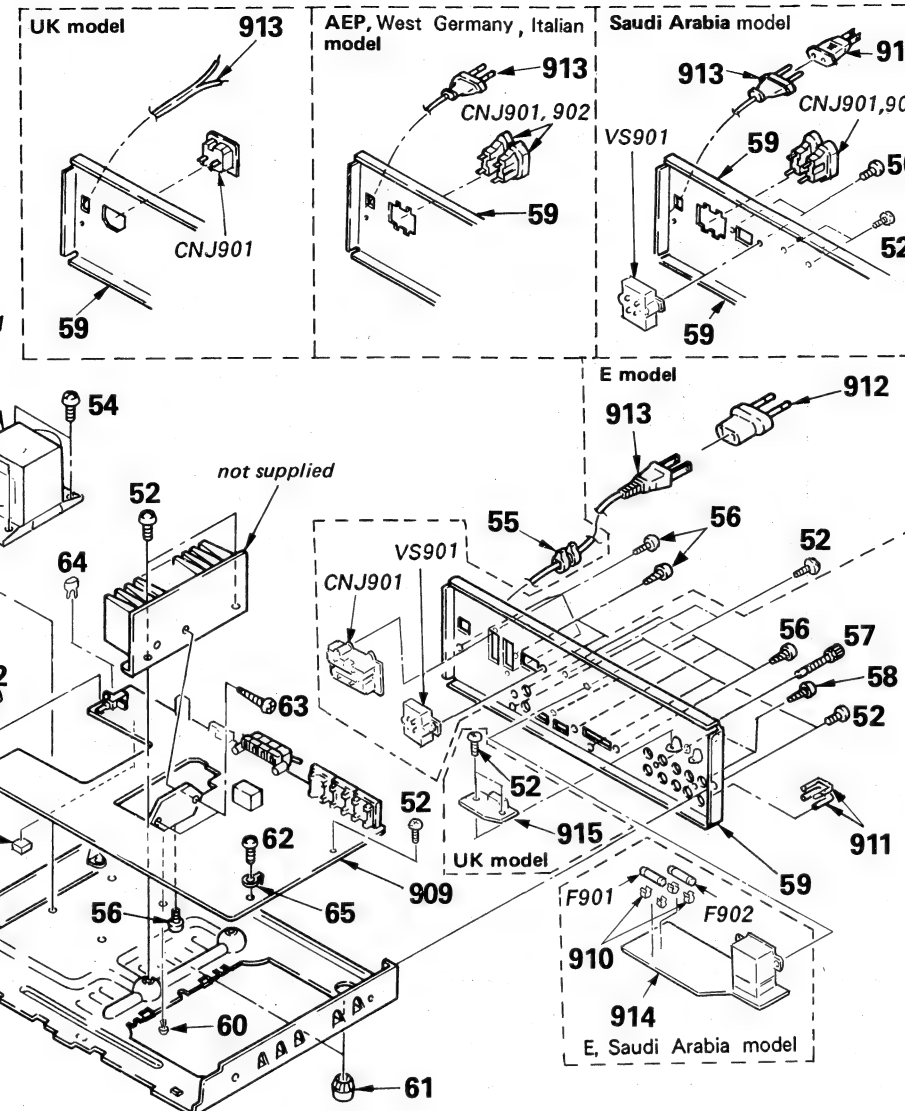
In each case, U: μ , for example:
UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

WG: West German
IT: Italian

(2)

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.



| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-----|---------------|---|---------|-----|-----------------------|--|---------|
| 51 | *X-4917-246-1 | CHASSIS ASSY | | 909 | *A-4333-212-A | (AEP).....MOUNTED PCB, MAIN | |
| 52 | 7-682-548-04 | SCREW +BVTT 3X8 (S) | | | *A-4333-213-A | (UK).....MOUNTED PCB, MAIN | |
| 53 | 9-911-843-XX | RUBBER, CUSHION | | | *A-4333-214-A | (E,Saudi Arabia)....MOUNTED PCB, MAIN | |
| 54 | 7-682-560-04 | SCREW +BVTT 4X6 (S) | | | *A-4333-215-A | (WG,IT).....MOUNTED PCB, MAIN | |
| 55 | 3-703-571-11 | (E)....BUSHING (S) (4516), CORD | | 910 | *1-533-213-31 | HOLDER, FUSE | |
| | *3-703-244-00 | (AEP,UK,WG,Saudi Arabia,IT) | | 911 | 1-535-706-11 | (AEP,UK,WG,IT)...PLUG, JUMPER | |
| | | ...BUSHING (2104), CORD | | 912 | Δ 1-506-409-11 | (Saudi Arabia)...ADAPTOR, CONVERSION | |
| | | | | | Δ 1-526-565-00 | (E).....AC PLUG ADAPTOR | |
| 56 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | | 913 | Δ 1-551-188-XX | (E)....CORD, POWER | |
| 57 | 3-706-165-00 | SCREW | | | Δ 1-555-750-00 | (AEP,WG,Saudi Arabia,IT)...CORD, POWER | |
| 58 | 7-621-849-00 | SCREW, TAPPING | | | Δ 1-556-035-00 | (UK)....CORD, POWER | |
| 59 | *4-928-482-11 | (AEP).....PANEL, BACK | | 914 | *1-631-087-11 | (E,Saudi Arabia)...PC BOARD, POWER | |
| | *4-928-482-21 | (UK).....PANEL, BACK | | 915 | *1-631-089-11 | (UK)...PC BOARD, CONNECTOR | |
| | *4-928-482-31 | (E).....PANEL, BACK | | | | | |
| | *4-928-482-41 | (WG).....PANEL, BACK | | | | | |
| | *4-928-482-51 | (Saudi Arabia)...PANEL, BACK | | | | | |
| | *4-928-482-61 | (IT).....PANEL, BACK | | | | | |
| 60 | 4-917-239-01 | RIVET, NYLON | | | | | |
| 61 | X-4917-254-1 | FOOT ASSY | | | | | |
| 62 | 3-703-685-21 | SCREW (+BV 3X8) | | | | | |
| 63 | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 IT-3 | | | | | |
| 64 | *4-875-455-31 | (AEP,UK,WG,IT)...COVER(DIA.20), CAPACITOR | | | | | |
| 65 | 4-870-539-00 | PLATE, GROUND | | | | | |
| 906 | *1-631-091-11 | PC BOARD, CONNECT (A) | | | | | |
| 907 | *1-631-092-11 | PC BOARD, CONNECT (B) | | | | | |
| 908 | *1-631-093-11 | PC BOARD, CONNECT (C) | | | | | |

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|-----------------------|---|---------|--------------|--|
| 901 | *A-4333-217-A | MOUNTED PCB, PANEL | C110 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| 902 | *1-631-084-11 | PC BOARD, MICROPHONE | C111 | 1-124-257-00 | ELECT 2.2MF |
| 903 | *1-631-090-11 | PC BOARD, HP | C112 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| 904 | *1-631-085-11 | PC BOARD, REMOTE CONTROL | C113 | 1-124-257-00 | ELECT 2.2MF |
| 905 | *1-631-086-11 | (E,Saudi Arabia)...PC BOARD, SW | C114 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| 906 | *1-631-091-11 | PC BOARD, CONNECT (A) | C115 | 1-161-494-00 | CERAMIC 0.022MF |
| 907 | *1-631-092-11 | PC BOARD, CONNECT (B) | C151 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia)....CERAMIC 100PF |
| 908 | *1-631-093-11 | PC BOARD, CONNECT (C) | C151 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| 909 | *A-4333-212-A | (AEP).....MOUNTED PCB, MAIN | C152 | 1-124-257-00 | ELECT 2.2MF |
| | *A-4333-213-A | (UK).....MOUNTED PCB, MAIN | C153 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia)....CERAMIC 100PF |
| | *A-4333-214-A | (E,Saudi Arabia)....MOUNTED PCB, MAIN | C153 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | *A-4333-215-A | (WG,IT).....MOUNTED PCB, MAIN | C154 | 1-162-219-31 | CERAMIC 68PF |
| 910 | *1-533-213-31 | HOLDER, FUSE | C155 | 1-123-382-00 | ELECT 3.3MF |
| 911 | 1-535-706-11 | (AEP,UK,WG,IT)...PLUG, JUMPER | C156 | 1-130-480-00 | MYLAR 0.0056MF |
| 912 | Δ 1-506-409-11 | (Saudi Arabia)...ADAPTOR, CONVERSION | C157 | 1-130-473-00 | MYLAR 0.0015MF |
| | Δ 1-526-565-00 | (E).....AC PLUG ADAPTOR | C158 | 1-124-464-11 | ELECT 0.22MF |
| 913 | Δ 1-551-188-XX | (E)....CORD, POWER | C159 | 1-124-963-11 | ELECT 33MF |
| | Δ 1-555-750-00 | (AEP,WG,Saudi Arabia,IT)...CORD, POWER | C160 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | Δ 1-556-035-00 | (UK)....CORD, POWER | C161 | 1-124-257-00 | ELECT 2.2MF |
| 914 | *1-631-087-11 | (E,Saudi Arabia)...PC BOARD, POWER | C162 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| 915 | *1-631-089-11 | (UK)...PC BOARD, CONNECTOR | C163 | 1-124-257-00 | ELECT 2.2MF |
| BP901 | *1-535-116-00 | TERMINAL | C164 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| BP902 | *1-535-118-00 | TERMINAL | C201 | 1-124-925-11 | ELECT 2.2MF |
| BP903 | *1-535-118-00 | TERMINAL | C202 | 1-162-294-31 | CERAMIC 0.001MF |
| BP904 | *1-535-135-00 | (E,Saudi Arabia)....BASE POST 14MM (10MM PITCH) 2P | C203 | 1-162-219-31 | CERAMIC 68PF |
| BP905 | *1-535-135-00 | (E,Saudi Arabia)....BASE POST 14MM (10MM PITCH) 2P | C204 | 1-162-284-31 | CERAMIC 150PF |
| BP906 | *1-535-139-00 | (UK)....BASE POST 19MM (10MM PITCH) 2P | C205 | 1-124-463-00 | ELECT 0.1MF |
| BP907 | *1-535-140-00 | (E)....BASE POST 19MM (10MM PITCH) 3P | C206 | 1-124-963-11 | ELECT 33MF |
| BP907 | *1-535-141-00 | (AEP,UK,WG,Saudi Arabia,IT)....BASE POST 19MM (10MM PITCH) 4P | C207 | 1-124-963-11 | ELECT 33MF |
| C101 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia)....CERAMIC 100PF 10% 50V | C301 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| C101 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF 10% 50V | C302 | 1-124-257-00 | ELECT 2.2MF |
| C102 | 1-124-257-00 | ELECT 2.2MF 20% 50V | C303 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| C103 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia)....CERAMIC 100PF 10% 50V | C304 | 1-161-494-00 | CERAMIC 0.022MF |
| C103 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF 10% 50V | C305 | 1-161-494-00 | CERAMIC 0.022MF |
| C104 | 1-162-219-31 | CERAMIC 68PF 5% 50V | C306 | 1-161-494-00 | CERAMIC 0.022MF |
| C105 | 1-123-382-00 | ELECT 3.3MF 20% 50V | C307 | 1-161-494-00 | CERAMIC 0.022MF |
| C106 | 1-130-480-00 | MYLAR 0.0056MF 5% 50V | C308 | 1-161-494-00 | CERAMIC 0.022MF |
| C107 | 1-130-473-00 | MYLAR 0.0015MF 5% 50V | C309 | 1-161-494-00 | CERAMIC 0.022MF |
| C108 | 1-124-464-11 | ELECT 0.22MF 20% 50V | C310 | 1-124-556-11 | ELECT 2200MF |
| C109 | 1-124-963-11 | ELECT 33MF 20% 16V | C311 | 1-161-494-00 | CERAMIC 0.022MF |
| | | | C312 | 1-124-902-00 | ELECT 0.47MF |

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:

UA...: μ A..., UPA...: μ PA...,

UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

WG: West Germany

IT: Italian

| Ref.No. | Part No. | Description |
|---------|-----------------------------------|--|
| 901 | *A-4333-217-A | MOUNTED PCB, PANEL |
| 902 | *1-631-084-11 | PC BOARD, MICROPHONE |
| 903 | *1-631-090-11 | PC BOARD, HP |
| 904 | *1-631-085-11 | PC BOARD, REMOTE CONTROL |
| 905 | *1-631-086-11 | (E,Saudi Arabia)...PC BOARD, SW |
| 906 | *1-631-091-11 | PC BOARD, CONNECT (A) |
| 907 | *1-631-092-11 | PC BOARD, CONNECT (B) |
| 908 | *1-631-093-11 | PC BOARD, CONNECT (C) |
| 909 | *A-4333-212-A | (AEP).....MOUNTED PCB, MAIN |
| | *A-4333-213-A | (UK).....MOUNTED PCB, MAIN |
| | *A-4333-214-A | (E,Saudi Arabia)...MOUNTED PCB, MAIN |
| | *A-4333-215-A | (WG,IT).....MOUNTED PCB, MAIN |
| 910 | *1-533-213-31 | HOLDER, FUSE |
| 911 | 1-535-706-11 | (AEP,UK,WG,IT)...PLUG, JUMPER |
| 912 | Δ 1-506-409-11 | (Saudi Arabia)...ADAPTOR, CONVERSION |
| | Δ 1-526-565-00 | (E).....AC PLUG ADAPTOR |
| 913 | Δ 1-551-188-XX | (E).....CORD, POWER |
| | Δ 1-555-750-00 | (AEP,WG,Saudi Arabia,IT)..CORD, POWER |
| | Δ 1-556-035-00 | (UK).....CORD, POWER |
| 914 | *1-631-087-11 | (E,Saudi Arabia)...PC BOARD, POWER |
| 915 | *1-631-089-11 | (UK)...PC BOARD, CONNECTOR |
| BP901 | *1-535-116-00 | TERMINAL |
| BP902 | *1-535-118-00 | TERMINAL |
| BP903 | *1-535-118-00 | TERMINAL |
| BP904 | *1-535-135-00 | (E,Saudi Arabia) |
| | ...BASE POST 14MM (10MM PITCH) 2P | |
| BP905 | *1-535-135-00 | (E,Saudi Arabia) |
| | ...BASE POST 14MM (10MM PITCH) 2P | |
| BP906 | *1-535-139-00 | (UK)...BASE POST 19MM (10MM PITCH) 2P |
| BP907 | *1-535-140-00 | (E).....BASE POST 19MM (10MM PITCH) 3P |
| BP907 | *1-535-141-00 | (AEP,UK,WG,Saudi Arabia,IT) |
| | ...BASE POST 19MM (10MM PITCH) 4P | |
| C101 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia) |
| | ...CERAMIC 100PF | 10% 50V |
| C101 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C102 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C103 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia) |
| | ...CERAMIC 100PF | 10% 50V |
| C103 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C104 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C105 | 1-123-382-00 | ELECT 3.3MF |
| | | 20% 50V |
| C106 | 1-130-480-00 | MYLAR 0.0056MF |
| | | 5% 50V |
| C107 | 1-130-473-00 | MYLAR 0.0015MF |
| | | 5% 50V |
| C108 | 1-124-464-11 | ELECT 0.22MF |
| | | 20% 50V |
| C109 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |

| Ref.No. | Part No. | Description |
|---------|------------------|-------------------------|
| C110 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C111 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C112 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C113 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C114 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C115 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C151 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia) |
| | ...CERAMIC 100PF | 10% 50V |
| C151 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C152 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C153 | 1-162-282-31 | (AEP,UK,E,Saudi Arabia) |
| | ...CERAMIC 100PF | 10% 50V |
| C153 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C154 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C155 | 1-123-382-00 | ELECT 3.3MF |
| | | 20% 50V |
| C156 | 1-130-480-00 | MYLAR 0.0056MF |
| | | 5% 50V |
| C157 | 1-130-473-00 | MYLAR 0.0015MF |
| | | 5% 50V |
| C158 | 1-124-464-11 | ELECT 0.22MF |
| | | 20% 50V |
| C159 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C160 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C161 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C162 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C163 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C164 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C201 | 1-124-925-11 | ELECT 2.2MF |
| | | 20% 50V |
| C202 | 1-162-294-31 | CERAMIC 0.001MF |
| | | 10% 50V |
| C203 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C204 | 1-162-284-31 | CERAMIC 150PF |
| | | 10% 50V |
| C205 | 1-124-463-00 | ELECT 0.1MF |
| | | 20% 50V |
| C206 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C207 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C301 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C302 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C303 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C304 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C305 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C306 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C307 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C308 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C309 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C310 | 1-124-556-11 | ELECT 2200MF |
| | | 20% 16V |
| C311 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C312 | 1-124-902-00 | ELECT 0.47MF |
| | | 20% 50V |

| Ref.No. | Part No. | Description |
|---------|--------------|-------------------------|
| C313 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C315 | 1-102-963-00 | CERAMIC 33PF |
| | | 5% 50V |
| C316 | 1-102-963-00 | CERAMIC 33PF |
| | | 5% 50V |
| C317 | 1-126-176-11 | ELECT 220MF |
| | | 20% 10V |
| C318 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C319 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C320 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C321 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C322 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C323 | 1-124-446-11 | ELECT 47MF |
| | | 20% 10V |
| C324 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C326 | 1-124-902-00 | ELECT 0.47MF |
| | | 20% 50V |
| C327 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C329 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C330 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C331 | 1-161-494-00 | CERAMIC 0.022MF |
| | | 25V |
| C351 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C352 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C353 | 1-162-288-31 | (WG,IT)...CERAMIC 330PF |
| | | 10% 50V |
| C376 | 1-124-902-00 | ELECT 0.47MF |
| | | 20% 50V |
| C401 | 1-126-096-11 | ELECT 10MF |
| | | 20% 25V |
| C402 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C403 | 1-162-197-31 | CERAMIC 6.8PF |
| | | 10% 50V |
| C404 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C405 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C413 | 1-136-154-00 | FILM 0.012MF |
| | | 5% 50V |
| C414 | 1-136-154-00 | FILM 0.012MF |
| | | 5% 50V |
| C415 | 1-130-473-00 | MYLAR 0.0015MF |
| | | 5% 50V |
| C416 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C418 | 1-126-096-11 | ELECT 10MF |
| | | 20% 25V |
| C419 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C420 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C421 | 1-162-282-31 | CERAMIC 100PF |
| | | 10% 50V |
| C422 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C423 | 1-126-163-11 | ELECT 4.7MF |
| | | 20% 50V |
| C424 | 1-124-438-00 | ELECT 1MF |
| | | 20% 50V |
| C425 | 1-136-165-00 | FILM 0.1MF |
| | | 5% 50V |
| C426 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C451 | 1-126-096-11 | ELECT 10MF |
| | | 20% 25V |
| C452 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C453 | 1-162-197-31 | CERAMIC 6.8PF |
| | | 10% 50V |
| C454 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C455 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C463 | 1-136-154-00 | FILM 0.012MF |
| | | 5% 50V |
| C464 | 1-136-154-00 | FILM 0.012MF |
| | | 5% 50V |
| C465 | 1-130-473-00 | MYLAR 0.0015MF |
| | | 5% 50V |
| C466 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C468 | 1-126-096-11 | ELECT 10MF |
| | | 20% 25V |
| C469 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C470 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C471 | 1-162-282-31 | CERAMIC 100PF |
| | | 10% 50V |
| C472 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C473 | 1-126-163-11 | ELECT 4.7MF |
| | | 20% 50V |
| C474 | 1-124-438-00 | ELECT 1MF |
| | | 20% 50V |
| C475 | 1-136-165-00 | FILM 0.1MF |
| | | 5% 50V |
| C476 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C477 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |

| Ref.No. | Part No. | Description |
|---------|---------------|--------------------------|
| C478 | 1-162-219-31 | CERAMIC 68PF |
| | | 5% 50V |
| C479 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C480 | 1-124-963-11 | ELECT 33MF |
| | | 20% 16V |
| C502 | 1-162-282-31 | CERAMIC 100PF |
| | | 10% 50V |
| C503 | 1-126-101-11 | ELECT 100MF |
| | | 20% 16V |
| C504 | 1-162-286-31 | CERAMIC 220PF |
| | | 10% 50V |
| C506 | 1-124-910-11 | ELECT 47MF |
| | | 20% 35V |
| C507 | 1-124-122-11 | ELECT 100MF |
| | | 20% 50V |
| C508 | 1-124-122-11 | ELECT 100MF |
| | | 20% 50V |
| C509 | 1-124-915-11 | (E,Saudi Arabia) |
| | ...ELECT 10MF | 20% 63V |
| C509 | 1-126-233-11 | (AEP,UK,WG,IT) |
| | ...ELECT 22MF | 20% 50V |
| C510 | 1-136-163-00 | FILM 0.068MF |
| | | 5% 50V |
| C511 | 1-136-163-00 | FILM 0.068MF |
| | | 5% 50V |
| C514 | 1-136-163-00 | (WG,IT)...FILM 0.068MF |
| | | 5% 50V |
| C515 | 1-136-163-00 | (WG,IT)...FILM 0.068MF |
| | | 5% 50V |
| C516 | 1-161-379-00 | (WG,IT)...CERAMIC 0.01MF |
| | | 2% 16V |
| C552 | 1-162-282-31 | CERAMIC 100PF |
| | | 10% 50V |
| C553 | 1-126-101-11 | ELECT 100MF |
| | | 20% 16V |
| C554 | 1-162-286-31 | CERAMIC 220PF |
| | | 10% 50V |
| C556 | 1-124-910-11 | ELECT 47MF |
| | | 20% 35V |
| C560 | 1-136-163-00 | FILM 0.068MF |
| | | 5% 50V |
| C561 | 1-136-163-00 | FILM 0.068MF |
| | | 5% 50V |
| C564 | 1-136-163-00 | (WG,IT)...FILM 0.068MF |
| | | 5% 50V |
| C565 | 1-136-163-00 | (WG,IT)...FILM 0.068MF |
| | | 5% 50V |
| C566 | 1-161-379-00 | (WG,IT)...CERAMIC 0.01MF |
| | | 2% 16V |
| C707 | 1-126-176-11 | ELECT 220MF |
| | | 20% 6.3V |
| C708 | 1-126-176-11 | ELECT 220MF |
| | | 20% 6.3V |
| C709 | 1-124-443-00 | ELECT 100MF |
| | | 20% 6.3V |
| C710 | 1-124-464-11 | ELECT 0.22MF |
| | | 20% 50V |
| C711 | 1-124-257-00 | ELECT 2.2MF |
| | | 20% 50V |
| C901 | 1-102-355-00 | CERAMIC 0.01MF |
| | | 250V |
| C902 | 1-162-294-31 | CERAMIC 0.001MF |
| | | 10% 5 |

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------------------|---------------------------------------|---|---------|---------------|----------------------------------|
| C925 | 1-126-101-11 | ELECT 100MF 20% 16V | D905 | 8-719-200-77 | DIODE 10E2N |
| C926 | 1-161-379-00 | CERAMIC 0.01MF 30% 25V | D906 | 8-719-200-77 | DIODE 10E2N |
| C927 | 1-161-379-00 | CERAMIC 0.01MF 30% 25V | D907 | 8-719-200-77 | DIODE 10E2N |
| C928 | 1-161-379-00 | CERAMIC 0.01MF 30% 25V | D908 | 8-719-200-77 | DIODE 10E2N |
| C929 | 1-161-494-00 | CERAMIC 0.022MF 25V | D909 | 8-719-200-77 | (E,Saudi Arabia)...DIODE 10E2N |
| C930 | 1-124-438-00 | ELECT 1MF 20% 50V | D910 | 8-719-200-77 | (E,Saudi Arabia)...DIODE 10E2N |
| CN101 | *1-566-858-11 | SOCKET, CONNECTOR 11P(SYSTEM CONTROL 1) | D911 | 8-719-000-26 | (E,Saudi Arabia)...DIODE US1060M |
| CN304 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | D912 | 8-719-000-26 | (E,Saudi Arabia)...DIODE US1060M |
| CN305 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | F901 | △1-532-259-00 | FUSE, TIME-LAG (1.6A) |
| CN308 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | F902 | △1-532-259-00 | (AEP,WG,E,Saudi Arabia,IT) |
| CN309 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | | | ...FUSE, TIME-LAG (1.6A) |
| CN310 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | F905 | △1-532-203-00 | FUSE, TIME-LAG (2A) |
| CN311 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | F906 | △1-532-203-00 | FUSE, TIME-LAG (2A) |
| CN312 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | IC101 | 8-759-600-02 | IC M5218L |
| CN314 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | IC201 | 8-759-106-41 | IC UPC4570C |
| CN315 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | IC301 | 8-759-800-37 | IC LC4066BH |
| CN316 | *1-565-438-11 | SOCKET, CONNECTOR (PCB) 10P | IC302 | 8-759-802-52 | IC LC7818 |
| CN402 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | IC303 | 8-759-632-31 | IC M50721-127P |
| CN413 | *1-565-439-11 | PIN, CONNECTOR (PCB) 10P | IC304 | 8-759-820-62 | IC L81639 |
| CN501 | *1-564-508-11 | PLUG, CONNECTOR 5P | IC305 | 8-749-920-83 | IC GP1U52XB |
| CN901 | *1-566-859-11 | SOCKET, CONNECTOR 15P(SYSTEM CONTROL 2) | IC401 | 8-759-106-41 | IC UPC4570C |
| CN903 | *1-564-506-11 | PLUG, CONNECTOR 3P | IC402 | 8-759-106-41 | IC UPC4570C |
| CN906 | *1-566-210-11 | (UK)...PIN, CONNECTOR 3P (OUT PUT) | IC403 | 8-759-106-41 | IC UPC4570C |
| CNJ901△1-540-041-11 | (E).....OUTLET, AC (NONPOLAR) (2P) | | IC501 | 8-749-900-78 | (E,Saudi Arabia)...IC STK4192II |
| CNJ901△1-526-751-00 | (UK).....OUTLET, AC | | IC501 | 8-749-941-52 | (AEP,UK,WG,IT).....IC STK4152II |
| CNJ901△1-526-794-11 | (AEP,WG,Saudi Arabia,IT)...OUTLET, AC | | IC702 | 8-759-111-68 | IC UPC1237HA |
| CNJ902△1-526-794-11 | (AEP,WG,Saudi Arabia,IT)...OUTLET, AC | | IC901 | 8-759-604-32 | IC M5F7810 |
| D301 | 8-719-000-26 | DIODE US1060M | IC902 | 8-759-604-50 | IC M5F7910 |
| D302 | 8-719-000-26 | DIODE US1060M | IC903 | 8-759-604-33 | (UK)...IC M5F7812 |
| D303 | 8-719-000-26 | DIODE US1060M | IC904 | 8-759-820-84 | IC L78MR05 |
| D304 | 8-719-933-36 | DIODE HZS6B1L | J101 | 1-565-320-11 | JACK, PIN 6P |
| D305 | 8-719-000-26 | DIODE US1060M | | | (PHONO IN,CD IN,VIDEO/DAT OUT) |
| D306 | 8-719-310-42 | DIODE SEL4225RM-D | J102 | 1-565-320-11 | JACK, PIN 6P |
| D307 | 8-719-301-44 | DIODE SEL2410E-D | | | (VIDEO/DAT IN,EQUALIZER OUT/IN) |
| D308 | 8-719-301-44 | DIODE SEL2410E-D | J201 | 1-563-347-11 | JACK (MIC) |
| D309 | 8-719-301-44 | DIODE SEL2410E-D | J501 | 1-565-352-21 | JACK, PIN 2P (SURROUND SPEAKER) |
| D310 | 8-719-301-44 | DIODE SEL2410E-D | J502 | 1-568-018-11 | JACK, LARGE TYPE 1P (HEADPHONES) |
| D311 | 8-719-301-44 | DIODE SEL2410E-D | L501 | *1-420-872-00 | COIL, AIR CORE |
| D312 | 8-719-301-44 | DIODE SEL2410E-D | L551 | *1-420-872-00 | COIL, AIR CORE |
| D313 | 8-719-301-44 | DIODE SEL2410E-D | Q301 | 8-729-107-98 | TRANSISTOR 2SC3622AL |
| D314 | 8-719-301-44 | DIODE SEL2410E-D | Q303 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D315 | 8-719-301-44 | DIODE SEL2410E-D | Q304 | 8-729-820-10 | TRANSISTOR 2SA1317 |
| D316 | 8-719-301-44 | DIODE SEL2410E-D | Q305 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| D317 | 8-719-311-87 | (E,Saudi Arabia)...DIODE SEL1222R-C | Q306 | 8-729-820-23 | TRANSISTOR 2SC330S |
| D401 | 8-719-311-86 | DIODE SEL4825WMCD | Q307 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| D402 | 8-719-311-86 | DIODE SEL4825WMCD | Q308 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D703 | 8-719-000-26 | DIODE US1060M | Q309 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D704 | 8-719-000-26 | DIODE US1060M | Q310 | 8-729-820-23 | TRANSISTOR 2SC330S |
| D705 | 8-719-000-26 | DIODE US1060M | Q311 | 8-729-820-10 | TRANSISTOR 2SA1317 |
| D706 | 8-719-000-26 | DIODE US1060M | Q312 | 8-729-820-23 | TRANSISTOR 2SC330S |
| D707 | 8-719-000-26 | DIODE US1060M | Q313 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D708 | 8-719-200-77 | DIODE 10E2N | Q314 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D753 | 8-719-000-26 | DIODE US1060M | Q315 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D901 | 8-719-302-38 | DIODE RBV-602-01 | Q316 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D902 | 8-719-200-77 | DIODE 10E2N | Q317 | 8-729-900-63 | TRANSISTOR DTA124ES |
| D903 | 8-719-002-45 | DIODE UZL-27M | Q318 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| D904 | 8-719-160-23 | DIODE RD5.1FB2 | Q319 | 8-729-806-34 | TRANSISTOR 2SC3400 |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|--------------|--|
| Q320 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| Q321 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| Q322 | 8-729-806-34 | TRANSISTOR 2SC3400 |
| Q351 | 8-729-107-98 | TRANSISTOR 2SC3622AL |
| Q401 | 8-729-224-63 | TRANSISTOR 2SK246BL |
| Q402 | 8-729-119-78 | TRANSISTOR 2SC2785HFE |
| Q451 | 8-729-224-63 | TRANSISTOR 2SK246BL |
| Q452 | 8-729-119-78 | TRANSISTOR 2SC2785HFE |
| Q711 | 8-729-108-06 | TRANSISTOR 2SC1841 |
| Q712 | 8-729-900-63 | TRANSISTOR DTA124ES |
| Q761 | 8-729-108-06 | TRANSISTOR 2SC1841 |
| Q901 | 8-729-920-91 | TRANSISTOR 2SB1187F |
| Q902 | 8-729-820-23 | (E,Saudi Arabia)...TRANSISTOR 2SC3330S |
| Q903 | 8-729-806-34 | (E,Saudi Arabia)...TRANSISTOR 2SC3400 |
| Q904 | 8-729-806-34 | (E,Saudi Arabia)...TRANSISTOR 2SC3400 |
| R101 | 1-249-417-11 | (WG,IT)...CARBON 1K 5% 1/4W |
| R103 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R105 | 1-247-832-11 | CARBON 1.1K 5% 1/4W |
| R106 | 1-247-897-11 | CARBON 560K 5% 1/4W |
| R107 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R108 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R109 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R110 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R112 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R113 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R114 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R115 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R117 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R119 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R121 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R122 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R123 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R124 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R151 | 1-249-417-11 | (WG,IT)...CARBON 1K 5% 1/4W |
| R153 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R155 | 1-247-832-11 | CARBON 1.1K 5% 1/4W |
| R156 | 1-247-897-11 | CARBON 560K 5% 1/4W |
| R157 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R158 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R159 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R160 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R162 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R163 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R164 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R165 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R167 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R169 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R171 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R172 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R173 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R174 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R201 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R202 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R203 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R204 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R205 | 1-249-416-11 | CARBON 820 5% 1/4W |
| R301 | 1-249-417-11 | CARBON 1K 5% 1/4W |

| Ref.No. | Part No. | Description |
|---------|--------------|---|
| R302 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R303 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R305 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R306 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R307 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R308 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R309 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R310 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R311 | 1-247-901-11 | CARBON 820K 5% 1/4W |
| R312 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R313 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R314 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R315 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R316 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R317 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R318 | 1-247-903-00 | CARBON 1M 5% 1/4W |
| R319 | 1-247-903-00 | CARBON 1M 5% 1/4W |
| R320 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R321 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R322 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R323 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R324 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R325 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R326 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R327 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R328 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R329 | 1-249-413-11 | CARBON 470 5% 1/4W |
| R330 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R331 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R332 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R333 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R334 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R335 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R336 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R337 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R338 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R339 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R340 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R341 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R342 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R343 | 1-249-431-11 | CARBON 15K 5% 1/4W |
| R344 | 1-249-410-11 | (E,Saudi Arabia) ...CARBON 270 5% 1/4W |
| R345 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R346 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R347 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R348 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R349 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R350 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R351 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R352 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R353 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R355 | 1-249-411-11 | CARBON 100K 5% 1/4W |
| R356 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R357 | 1-249-435-11 | CARBON 33K 5% 1/4W |

| Ref.No. | Part No. | Description | | | | |
|---------|---------------|-------------------------------|------|-----|------|---|
| R401 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R402 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R403 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R404 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R405 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R406 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R416 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R419 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |
| R420 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R421 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R422 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R423 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R425 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R426 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R427 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R428 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R429 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R430 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R431 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R432 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W | |
| R433 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R434 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W | |
| R435 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W | |
| R451 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R452 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R453 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R454 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R455 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R456 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R471 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R472 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R473 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R475 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R476 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R477 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R478 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R479 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R480 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R481 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R482 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W | |
| R483 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R484 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W | |
| R501 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R502 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R503 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R504 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R505 | 1-247-758-11 | (E,Saudi Arabia) ...CARBON | 3.3K | 5% | 1/2W | |
| R505 | 1-247-756-11 | (AEP,UK,WG,IT) ...CARBON | 2.2K | 5% | 1/2W | |
| R506 | 1-247-756-11 | (AEP,UK,WG,IT) ...CARBON | 2.2K | 5% | 1/2W | |
| R506 | 1-247-758-11 | (E,Saudi Arabia) ...CARBON | 3.3K | 5% | 1/2W | |
| R507 | △1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R508 | △1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R510 | 1-247-752-11 | CARBON | 1K | 5% | 1/2W | |
| R511 | 1-247-752-11 | CARBON | 1K | 5% | 1/2W | |
| R512 | 1-217-156-00 | METAL PLATE | 0.22 | 10% | 5W | |
| R514 | 1-247-727-11 | CARBON | 10 | 5% | 1/2W | |

| | | | | | | |
|------|---------------|------------------------------------|------|-----|------|---|
| R515 | 1-247-727-11 | CARBON | 10 | 5% | 1/2W | |
| R516 | 1-247-727-11 | (WG,IT)...CARBON | 10 | 5% | 1/2W | |
| R517 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R518 | 1-247-746-11 | CARBON | 390 | 5% | 1/2W | |
| R551 | 1-247-713-11 | CARBON | 1K | 5% | 1/4W | |
| R552 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R553 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R554 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R555 | 1-247-756-11 | (AEP,UK,WG,IT) ...CARBON | 2.2K | 5% | 1/2W | |
| R555 | 1-247-758-11 | (E,Saudi Arabia) ...CARBON | 3.3K | 5% | 1/2W | |
| R556 | 1-247-756-11 | (AEP,UK,WG,IT) ...CARBON | 2.2K | 5% | 1/2W | |
| R556 | 1-247-758-11 | (E,Saudi Arabia) ...CARBON | 3.3K | 5% | 1/2W | |
| R566 | 1-247-727-11 | (WG,IT)...CARBON | 10 | 5% | 1/2W | |
| R562 | 1-217-156-00 | METAL PLATE | 0.22 | 10% | 5W | |
| R564 | 1-247-727-11 | CARBON | 10 | 5% | 1/2W | |
| R565 | 1-247-727-11 | CARBON | 10 | 5% | 1/2W | |
| R567 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R568 | 1-247-746-11 | CARBON | 390 | 5% | 1/2W | |
| R722 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R723 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R724 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R725 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R726 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R727 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R729 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R730 | 1-247-764-11 | CARBON | 10K | 5% | 1/2W | |
| R731 | △1-215-891-11 | (E,Saudi Arabia) ...METAL OXIDE | 680 | 5% | 2W | F |
| R731 | △1-216-455-11 | (AEP,UK,WG,IT) ...METAL OXIDE | 560 | 5% | 2W | F |
| R732 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R733 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R734 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R772 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R773 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R774 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R775 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R901 | △1-217-469-00 | FUSIBLE | 1 | 5% | 1W | F |
| R902 | 1-247-761-11 | CARBON | 5.6K | 5% | 1/2W | |
| R903 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W | |
| R904 | △1-217-469-00 | FUSIBLE | 1 | 5% | 1W | F |
| R905 | △1-217-469-00 | FUSIBLE | 1 | 5% | 1W | F |
| R907 | 1-249-423-11 | (E,Saudi Arabia) ...CARBON | 3.3K | 5% | 1/4W | |
| R908 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R910 | 1-217-156-00 | (E,Saudi Arabia) ...METAL PLATE | 0.22 | 10% | 5W | |
| R911 | 1-217-156-00 | (E,Saudi Arabia) ...METAL PLATE | 0.22 | 10% | 5W | |
| R912 | 1-217-156-00 | (E,Saudi Arabia) ...METAL PLATE | 0.22 | 10% | 5W | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|---------------|---|
| R913 | 1-217-156-00 | (E,Saudi Arabia) ...METAL PLATE 0.22 10% 5W |
| R914 | △1-217-469-00 | FUSIBLE 1 5% 1W F |
| RV201 | 1-237-883-11 | RES, VAR, CARBON 50K (MIC LEVEL) |
| RV401 | 1-237-881-11 | RES, VAR, CARBON 100K/100K (BASS) |
| RV402 | 1-237-881-11 | RES, VAR, CARBON 100K/100K (TREBLE) |
| RV403 | 1-237-882-11 | RES, VAR, CARBON 100K (BALANCE) |
| RV404 | 1-237-884-11 | RES, VAR, CARBON 100K/100K (including motor)(VOLUME) |
| RY701 | 1-515-501-00 | RELAY |
| RY901 | 1-515-720-11 | RELAY |
| S301 | 1-554-303-21 | SWITCH, KEY BOARD (PHONO) |
| S302 | 1-554-303-21 | SWITCH, KEY BOARD (TUNER) |
| S303 | 1-554-303-21 | SWITCH, KEY BOARD (CD) |
| S304 | 1-554-303-21 | SWITCH, KEY BOARD (TAPE) |
| S305 | 1-554-303-21 | SWITCH, KEY BOARD (VIDEO/DAT) |
| S306 | 1-554-303-21 | SWITCH, KEY BOARD (EQ REC) |
| S307 | 1-552-412-00 | (E,Saudi Arabia) ...SWITCH, KEY BOARD (SYSTEM POWER) |
| S401 | 1-571-292-11 | SWITCH, PUSH (1 KEY)(SURROUND) |
| S402 | 1-571-292-11 | (AEP,WG,UK,IT)....SWITCH, PUSH (1 KEY)(DBFB) |
| S402 | 1-571-292-11 | (E,Saudi Arabia)...SWITCH, PUSH (1 KEY)(SAT) |
| S901 | △1-554-920-21 | (AEP,UK,WG,IT)....SWITCH, PUSH (1 KEY)(AC POWER)(POWER) |
| T901 | △1-449-724-11 | (E,Saudi Arabia)...TRANSFORMER, POWER |
| T901 | △1-449-725-11 | (AEP,WG,UK,IT)....TRANSFORMER, POWER |
| T902 | △1-449-723-11 | (E,Saudi Arabia)...TRANSFORMER, POWER |
| TB501 | 1-536-705-00 | TERMINAL BOARD (SP)(SPEAKER) |
| VS901 | △1-571-437-11 | (E,Saudi Arabia)...SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR) |
| XT301 | 1-567-839-11 | VIBRATOR, CERAMIC 3MHz |

The components identified by
mark △ or dotted line with mark
△ are critical for safety.
Replace only with part number
specified.

TC-V701

SERVICE MANUAL

*AEP Model
UK Model
E Model*


TC-V701 is the cassette deck section in LBT-V701.



| | |
|------------------------------------|---|
| Model Name Using Similar Mechanism | TC-WR810 |
| Tape Transport Mechanism Type | Deck A: TCM-170RA1 Deck B: TCM-170RB18 |

SPECIFICATIONS

| | |
|--------------------|---|
| Recording system | 4-track 2-channel stereo |
| Frequency response | DOLBY NR OFF (DIN) With TYPE II cassette (Sony UX-S) 30 to 14,000 Hz \pm 3 dB With TYPE I cassette (Sony HF-S) 30 to 13,000 Hz \pm 3 dB |
| Wow and flutter | \pm 0.2 % (DIN) |
| Dimensions | Approx. 355 \times 133 \times 308 mm (w/h/d) (14 \times 5 1/4 \times 12 1/8 inches) Incl. projecting parts and controls |
| Weight | Approx. 3.7 kg (8 lb 3 oz) |

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.



STEREO CASSETTE DECK
SONY®

SECTION 1

SERVICING NOTES

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• Power Supply

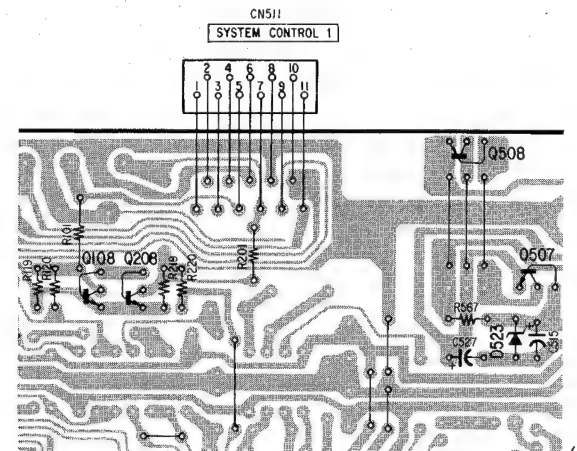
On servicing, connect CN510 (SYSTEM CONTROL 2) to the system amplifier TA-V701.

• LINE IN/OUT (CN511 : SYSTEM CONTROL 1)

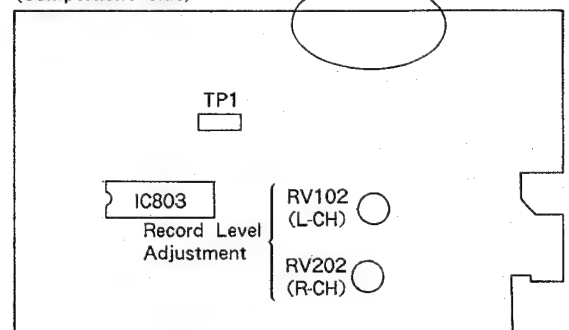
Location

LINE OUT { L-CH : Pin ⑤
R-CH : Pin ⑦



LINE IN { L-CH : Pin ⑨
R-CH : Pin ⑪



[Main Board]
(Component Side)



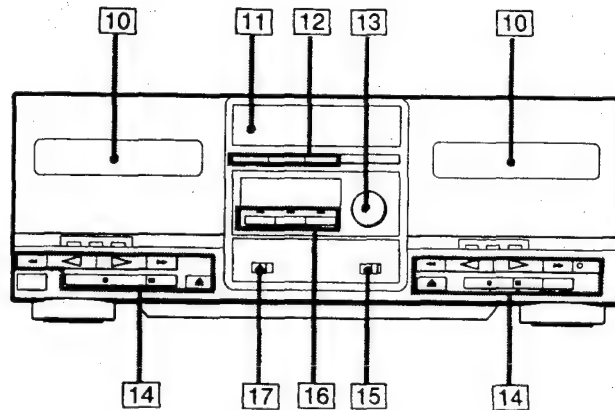
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


SECTION 2

GENERAL

• Parts Identification



- 10** Cassette holders
- 11** Display window
- 12** COUNTER setting buttons
- 13** REC (recording) LEVEL control
- 14** Tape operation buttons
 - ◀◀ Leftward fast winding
 - ▶▶ Rightward fast winding
 - ◁ Reverse play
 - ▷ Forward play
 - Stop
 - ▲ Eject
 - ⏸ PAUSE
 - REC MUTE (record muting, for deck B only)
 - REC (record, for deck B only)
- 15** DOLBY NR* (Noise Reduction) switch
- 16** SYNCHRO (synchronized) DUBBING speed selector
- 17** DIRECTION MODE selector

* Dolby Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
 "DOLBY" and the double-D symbol  are trademarks of Dolby Licensing Corporation.

SECTION 3 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

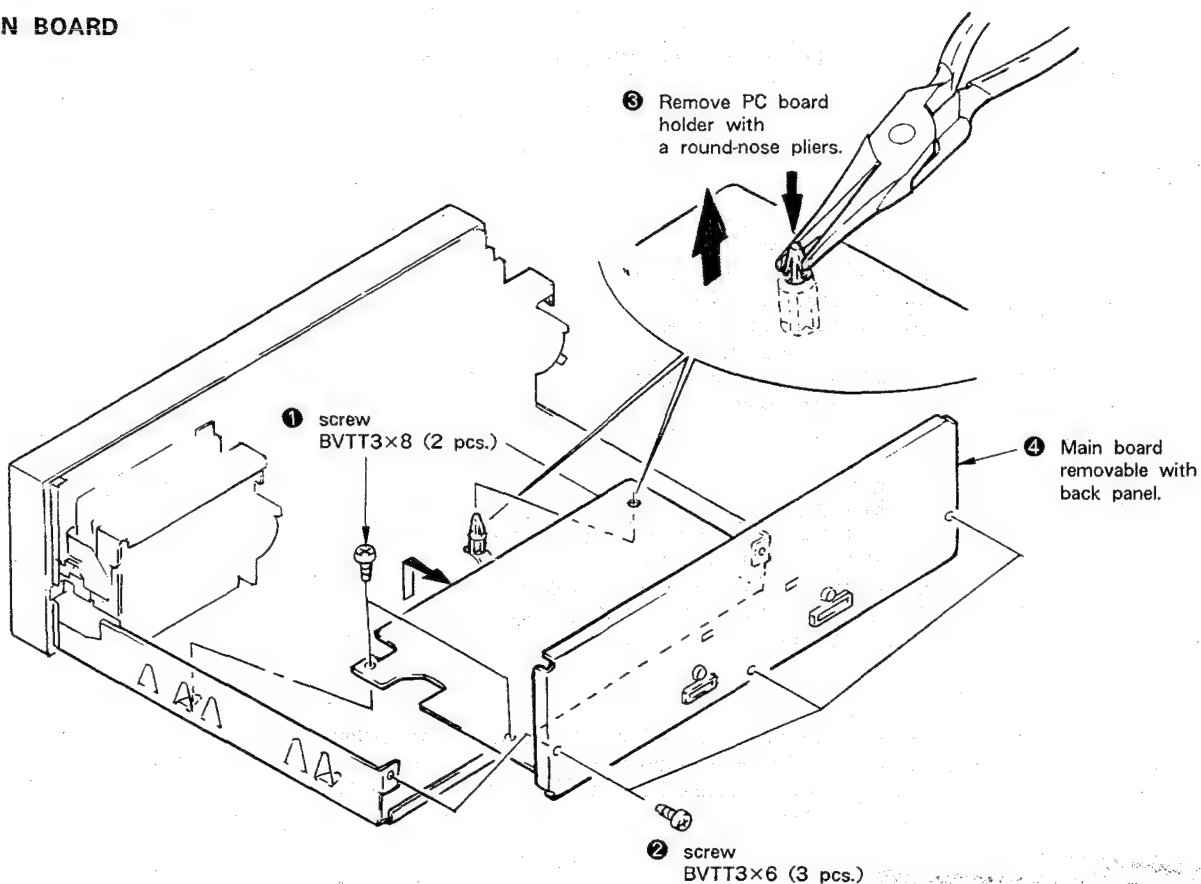
Remove the case by removing four case stopping screw (M3×8).



- ① Push EJECT button and slide the cassette lid off.
- ② Remove the connectors on MD blocks. (Deck A : CNP11, 12, 82, Deck B : CNP11, 12, 82, 83)
- ③ Remove the front panel assembly with MD blocks.
- ④ Remove eight MD stopping screw P2.6×8.
- ⑤ Remove the cassette holder assemblies and the cassette retainers.

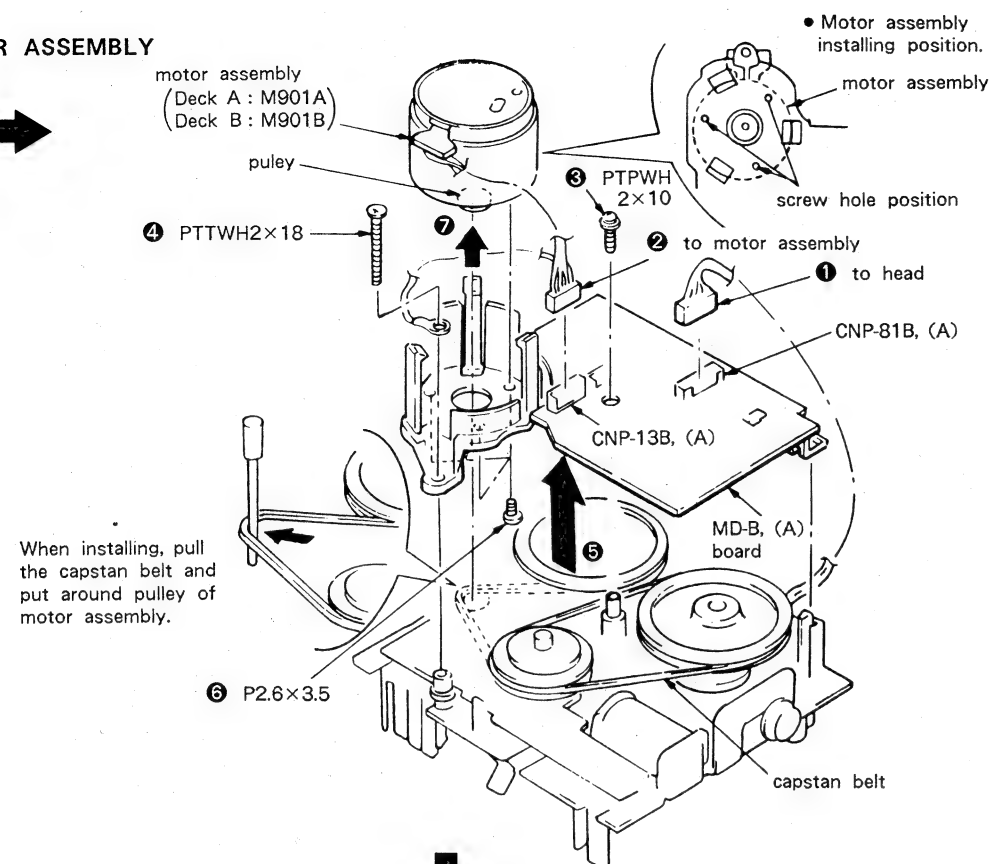


MAIN BOARD

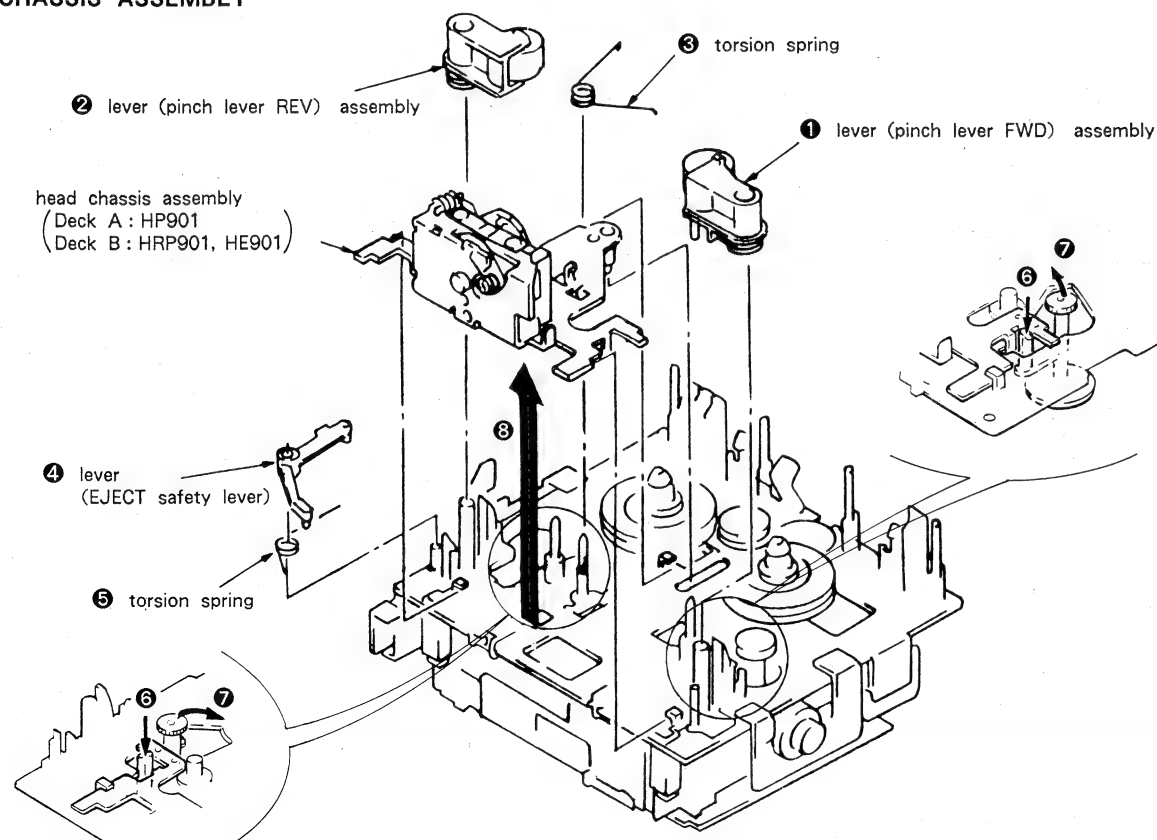


SECTION 4 ADJUSTMENTS

DECK A, B MOTOR ASSEMBLY



HEAD CHASSIS ASSEMBLY



4-1. MECHANICAL ADJUSTMENT

PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab :

| | |
|----------------------|--------------|
| record/playback head | pinch roller |
| erase head | rubber belts |
| capstan | idler |
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.

Torque Measurement

| Torque | Torque Meter | Meter Reading |
|------------------|--------------|--|
| FWD | CQ-102C | 30 to 60 g·cm (0.42 to 0.83 oz·inch) |
| FWD Back Tension | CQ-102C | 1 to 5 g·cm (0.014 to 0.06 oz·inch) |
| REV | CQ-102RC | 30 to 60 g·cm (0.42 to 0.83 oz·inch) |
| REV Back Tension | CQ-102RC | 1 to 5 g·cm (0.014 to 0.06 oz·inch) |
| FF, REW | CQ-201B | 100 to 170 g·cm (1.4 to 2.36 oz·inch) |

4-2. ELECTRICAL ADJUSTMENTS

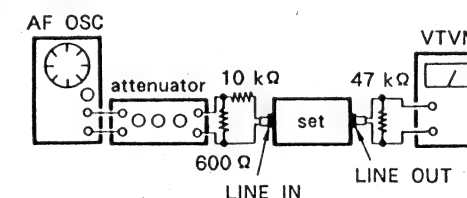
Note : The adjustment should be performed in the order given in the service manual.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF

- Standard Record :
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Record Mode



Standard Input Level

| | LINE IN |
|------------------|-----------------|
| source impedance | 10 kΩ |
| input level | 0.25 V (−10 dB) |

Standard Output Level

| | LINE OUT |
|----------------|----------------|
| load impedance | 47 kΩ |
| output level | 0.44 V (−5 dB) |

Test tape

| Type | Signal | User for |
|----------|----------------|-----------------------|
| P-4-A100 | 10 kHz, −10 dB | Azimuth Adjustment |
| P-4-L300 | 315 Hz, 0 dB | PB LEVEL Adjustment |
| WS-48B | 3 kHz, 0 dB | Tape Speed Adjustment |

Test Mode

When making pin ③ of IC803 low (connect TP1 to ground with jumper wire), following function operates.

- Source monitor
Release the line mute while recording.
- High speed playback
On recording, while pressing HIGH SPEED (DUBBING) button, high speed playback operates.
- Record memory stop
Using DIRECTION MODE switch ⇄, returns to the recording start point and stops or plays.
- LED indication of slide switch
When making Deck B pause, LED indicates the positions of DIRECTION MODE switch.

| Switch | Position | LED |
|----------------|----------|-------------|
| DIRECTION MODE | ⇄ | Deck A ◀ |
| | ⇄ | Deck A PLAY |
| | RELAY | Deck A ▶ |

- AGC gain check
When setting DIRECTION MODE switch to ⇄ and recording, AGC gain becomes maximum.

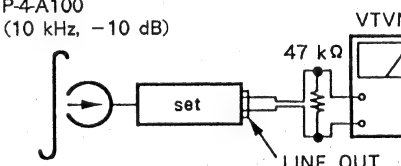
Record/Playback Head Azimuth Adjustment

DECK A DECK B

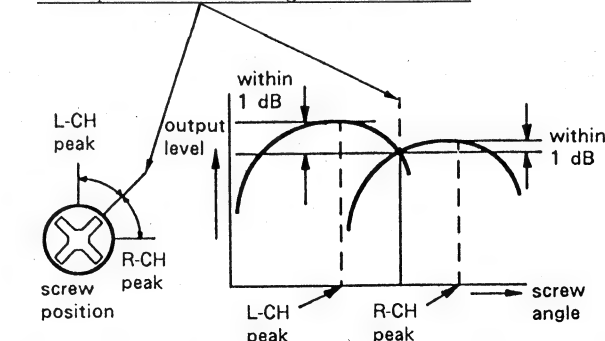
Procedure :

- Mode : FWD playback

test tape
P-4-A100
(10 kHz, −10 dB)

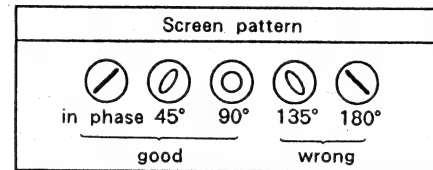
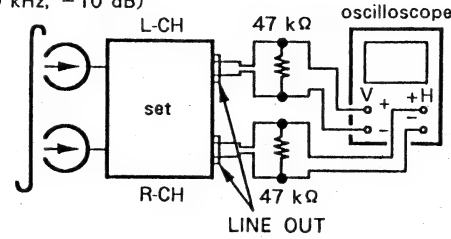


- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



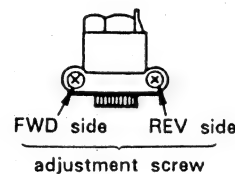
3. Phase Check Mode : playback

test tape
P-4-A100
(10 kHz, -10 dB)



- Set in the REV mode and repeat the step 1 - 3.
- After the adjustment, lock the screws with locking compound.

Adjustment Location : record/playback head

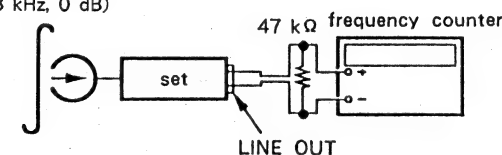


Tape Speed Adjustment **DECK A** **DECK B**

Perform high speed adjustment before normal speed adjustment.

Procedure :
Mode : FWD playback

test tape
WS-48B
(3 kHz, 0 dB)



[High Speed Adjustment]

- Short-circuit TP1.
- Put the set to FWD playback state.
- Press and keep on pressing HIGH SPEED DUBBING switch (S802 on FL board).
- On this time, adjust with the semi-fixed variable resistors (H) on the rear side of M901A (Deck A) and M901B (Deck B) so that the reading on the frequency counter becomes the adjustment limits.
- After adjustment, release the short on TP1.

[Normal Speed Adjustment]

- Put the set to FWD playback state.
- On this time, adjust with the semi-fixed variable resistors (L) on the rear side of M901A (Deck A) and M901B (Deck B) so that the reading on the frequency counter becomes the adjustment limits.

Adjustment Limits :

| Speed | Frequency Counter |
|--------|-------------------|
| high | 5,960 \pm 60 Hz |
| normal | 2,980 \pm 30 Hz |

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between Deck A and Deck B the beginning of the tape should be within 1.5%.

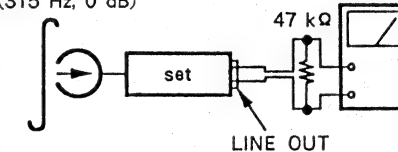
Adjustment Location :

Deck A : motor (M901A) rear side
Deck B : motor (M901B) rear side

Playback Level Adjustment **DECK A** **DECK B**

Procedure :
Mode : playback

P-4-L300
(315 Hz, 0 dB)



Adjust Deck A : RV41A (L-CH), RV61A (R-CH) and Deck B : RV41B (L-CH), RV61B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits :

LINE OUT level : -5 \pm 1.5 dB (0.37 - 0.51 V)

Level difference between channels : less than 1 dB.

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD (A), (B) board

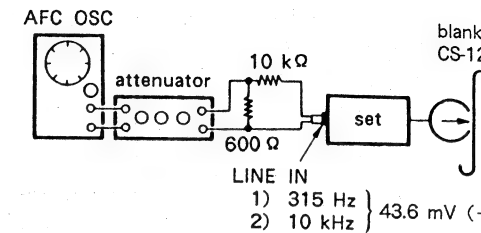
Record Bias Adjustment **DECK B**

Setting :

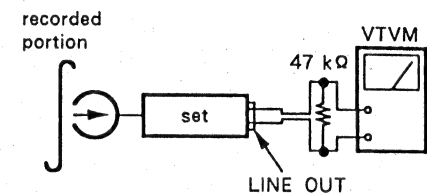
- REC LEVEL control : standard record (See page 10)
- Short-circuit TP1.

Procedure :

- Mode : record



- Mode : playback

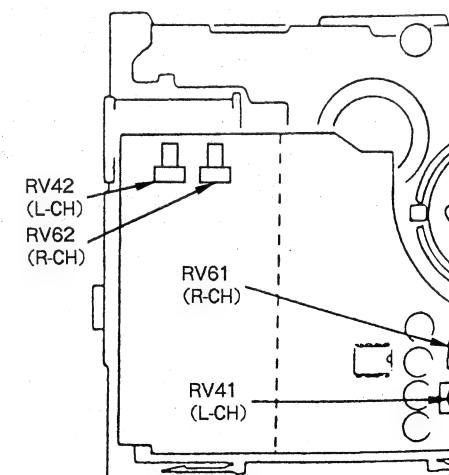


Confirm that the 10 kHz playback output is 0 \pm 0.5 dB to the 315 Hz output. If necessary, adjust RV42 (L-CH) and RV62 (R-CH) and repeat the steps given above.

- After adjustment, release the short on TP1.

Adjustment Location : MD (B) board

-Adjustment Parts Location Diagram-

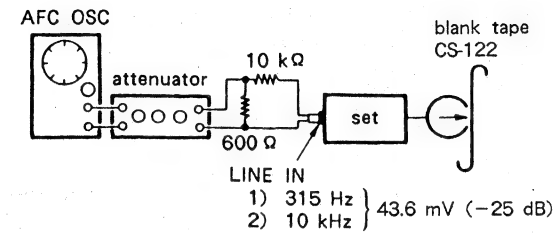


Record Bias Adjustment DECK B**Setting :**

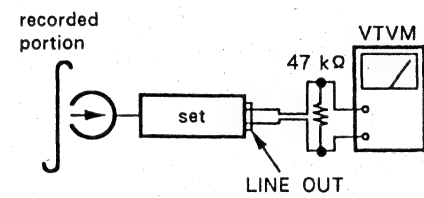
- REC LEVEL control : standard record (See page 6.)
- Short-circuit TP1.

Procedure :

1. Mode : record



2. Mode : playback



Confirm that the 10 kHz playback output is 0 ± 0.5 dB relative to the 315 Hz output. If necessary, adjust RV42 (L-CH), RV62 (R-CH) and repeat the steps given above.

3. After adjustment, release the short on TP1.

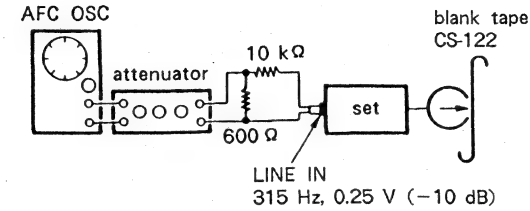
Adjustment Location : MD (B) board

Record Level Adjustment DECK B**Setting :**

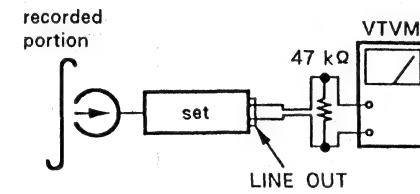
- REC LEVEL control : standard record (See page 6.)
- Short-circuit TP1.

Procedure :

1. Mode : record



2. Mode : playback

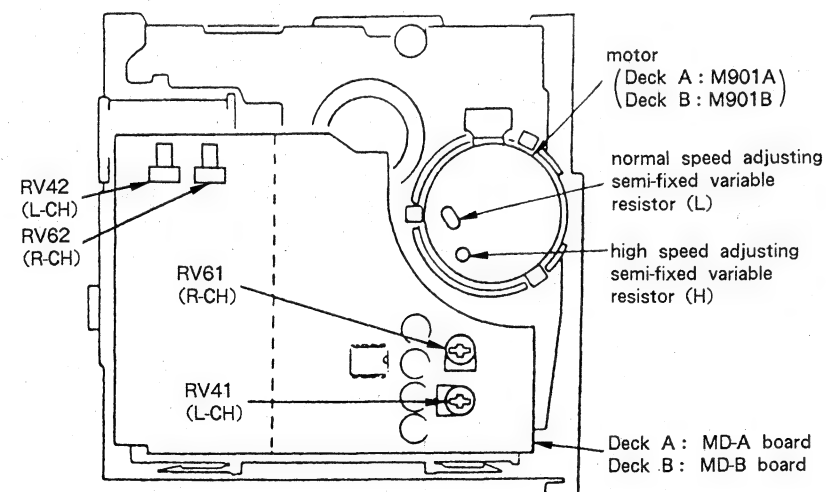
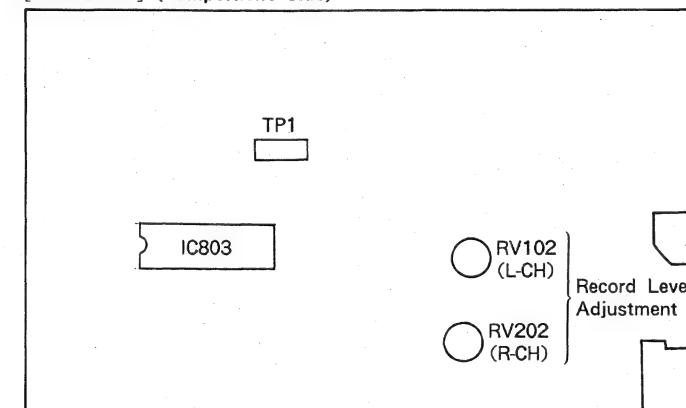


3. Play back the signal recorded in step 1.
Confirm that the signal level is within the specification below.
If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat the step 1 - 3.

4. After adjustment, release the short on TP1.

Specification : LINE OUT level : -5 ± 0.5 dB
(0.41 - 0.46 V)

Adjustment Location : main board

- Adjustment Parts Location Diagram -**[Main Board] (Component Side)**

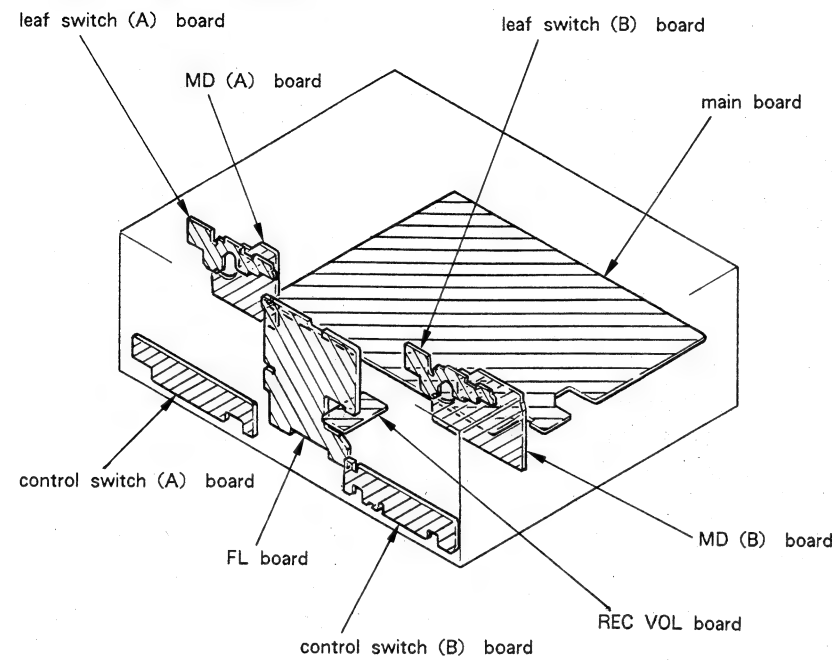
5-1. PRINTED WIRING BOARDS

• See page 20 for Semiconductor Lead Layouts.

Note :

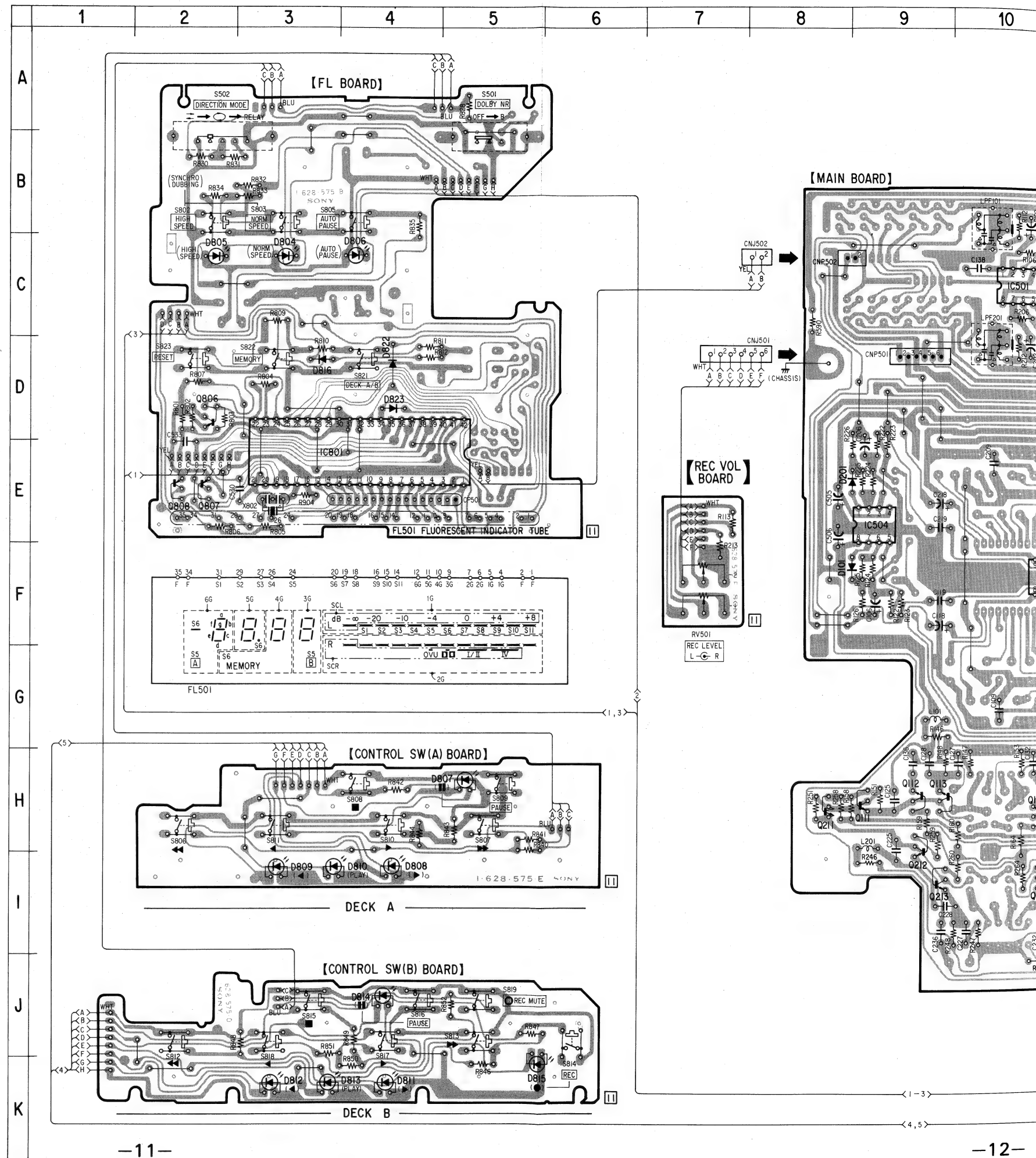
• ○ — : parts extracted from the component side.

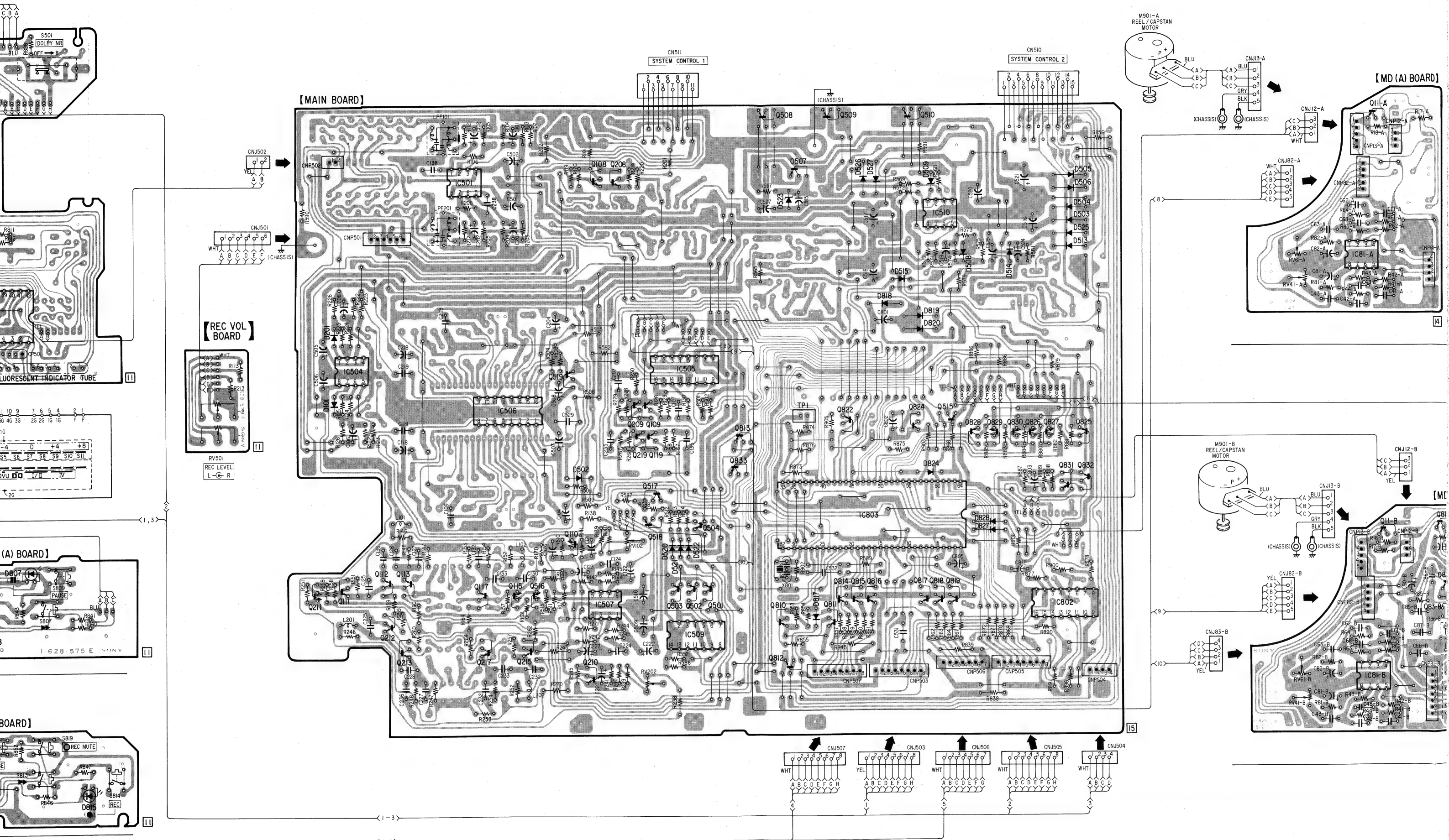
• Circuit Boards Location

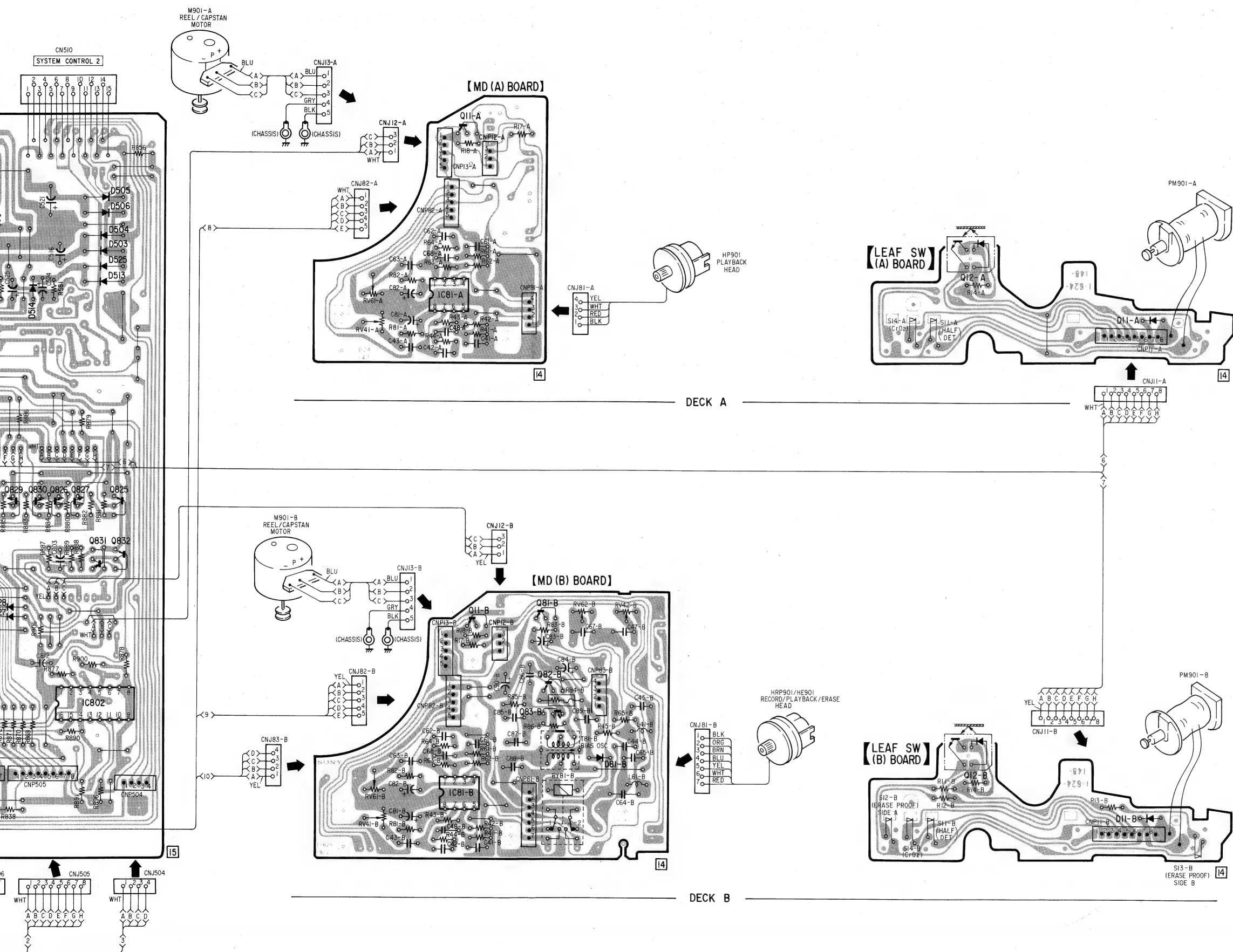


• Semiconductor Location

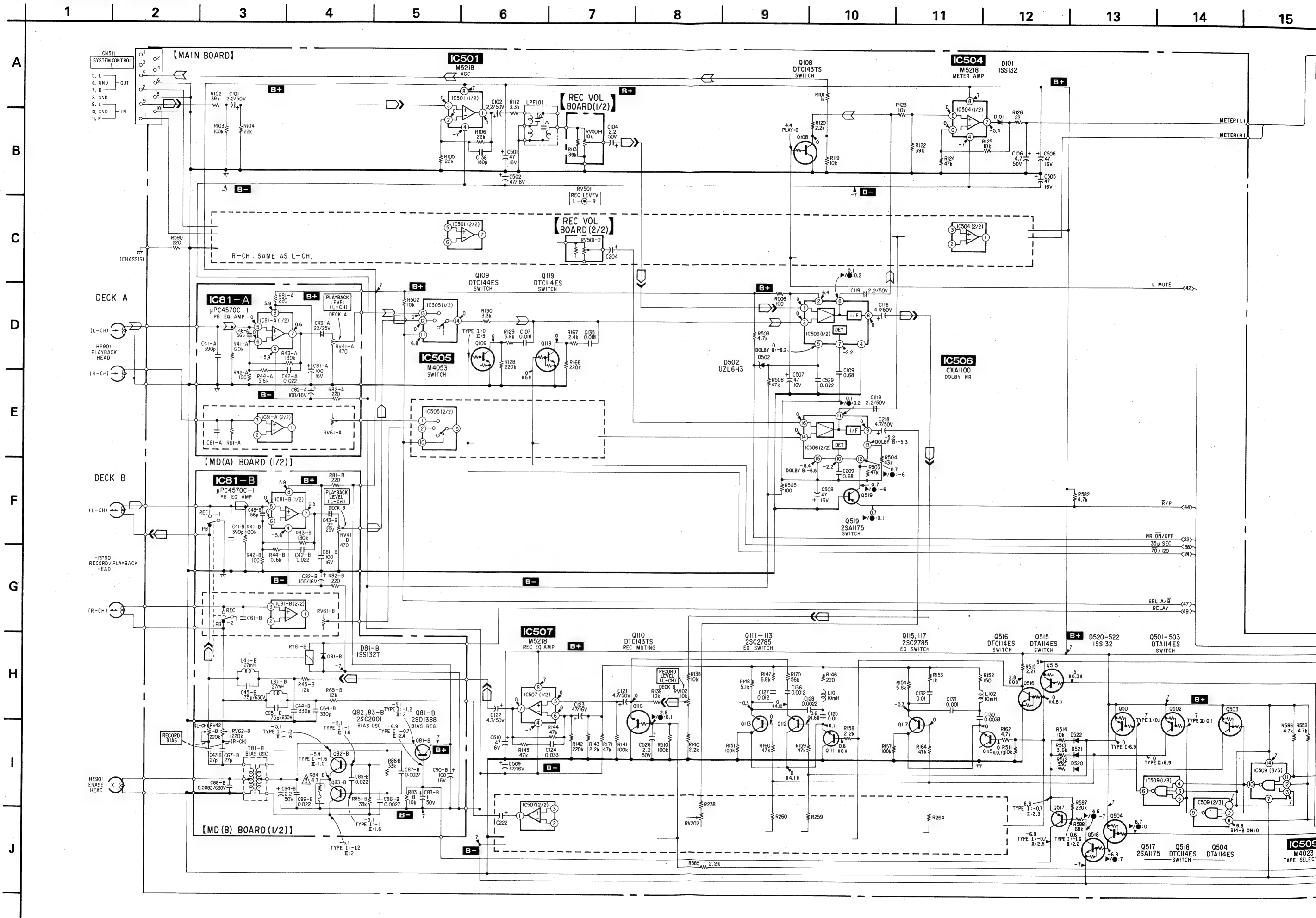
| Ref. No. | Location | Ref. No. | Location | Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|----------|----------|----------|----------|
| D11-A | D-29 | D816 | D-3 | Q111 | H-9 | Q813 | F-14 |
| D11-B | I-29 | D817 | H-14 | Q112 | H-9 | Q814 | H-15 |
| D81-B | I-23 | D818 | E-15 | Q113 | H-9 | Q815 | H-15 |
| D101 | F-9 | D819 | E-16 | Q115 | H-11 | Q816 | H-15 |
| D201 | E-9 | D820 | E-16 | Q117 | H-10 | Q817 | H-16 |
| D502 | G-12 | D822 | D-4 | Q119 | F-12 | Q818 | H-16 |
| D503 | C-18 | D823 | D-4 | Q208 | C-12 | Q819 | H-16 |
| D504 | C-18 | D824 | G-16 | Q209 | F-12 | Q822 | F-15 |
| D505 | C-18 | D827 | G-17 | Q210 | I-12 | Q824 | F-16 |
| D506 | C-18 | D828 | G-17 | Q211 | H-8 | Q825 | F-18 |
| D508 | D-16 | | | Q212 | I-9 | Q826 | F-17 |
| D509 | C-16 | IC81-A | D-21 | Q213 | I-9 | Q827 | F-17 |
| D513 | D-18 | IC81-B | I-21 | Q215 | I-11 | Q828 | F-16 |
| D514 | D-17 | IC501 | C-10 | Q217 | I-10 | Q829 | F-17 |
| D515 | D-16 | IC504 | E-9 | Q219 | F-12 | Q830 | F-17 |
| D520 | H-13 | IC505 | E-13 | Q501 | H-13 | Q831 | G-18 |
| D521 | H-13 | IC506 | F-11 | Q502 | H-13 | Q832 | G-18 |
| D522 | H-13 | IC507 | H-12 | Q503 | H-13 | Q833 | G-14 |
| D523 | C-14 | IC509 | I-13 | Q504 | G-13 | | |
| D525 | D-18 | IC510 | C-16 | Q507 | C-14 | | |
| D526 | C-15 | IC801 | E-3 | Q508 | B-14 | | |
| D527 | C-15 | IC802 | H-18 | Q509 | B-15 | | |
| D804 | C-3 | IC803 | G-15 | Q510 | B-16 | | |
| D805 | C-2 | | | Q515 | F-16 | | |
| D806 | C-4 | Q11-A | B-21 | Q516 | H-11 | | |
| D807 | H-5 | Q11-B | G-22 | Q517 | G-12 | | |
| D808 | I-4 | Q12-A | D-27 | Q518 | G-12 | | |
| D809 | I-3 | Q12-B | I-27 | Q519 | E-11 | | |
| D810 | I-3 | Q81-B | G-22 | Q806 | D-2 | | |
| D811 | K-4 | Q82-B | H-22 | Q807 | E-2 | | |
| D812 | K-3 | Q83-B | H-22 | Q808 | E-2 | | |
| D813 | K-3 | Q108 | C-12 | Q810 | H-14 | | |
| D814 | J-4 | Q109 | F-12 | Q811 | H-15 | | |
| D815 | K-5 | Q110 | H-11 | Q812 | I-14 | | |

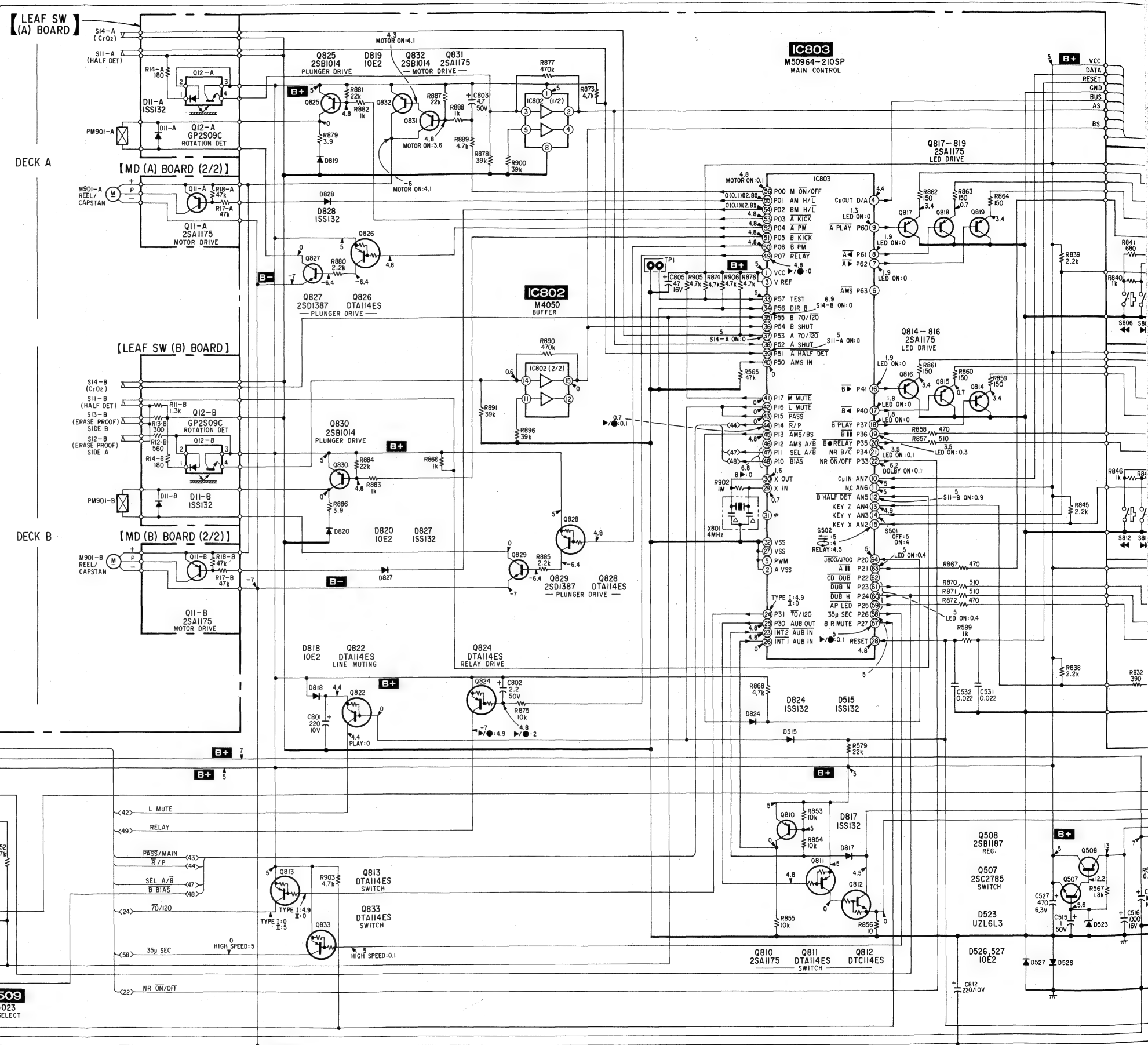
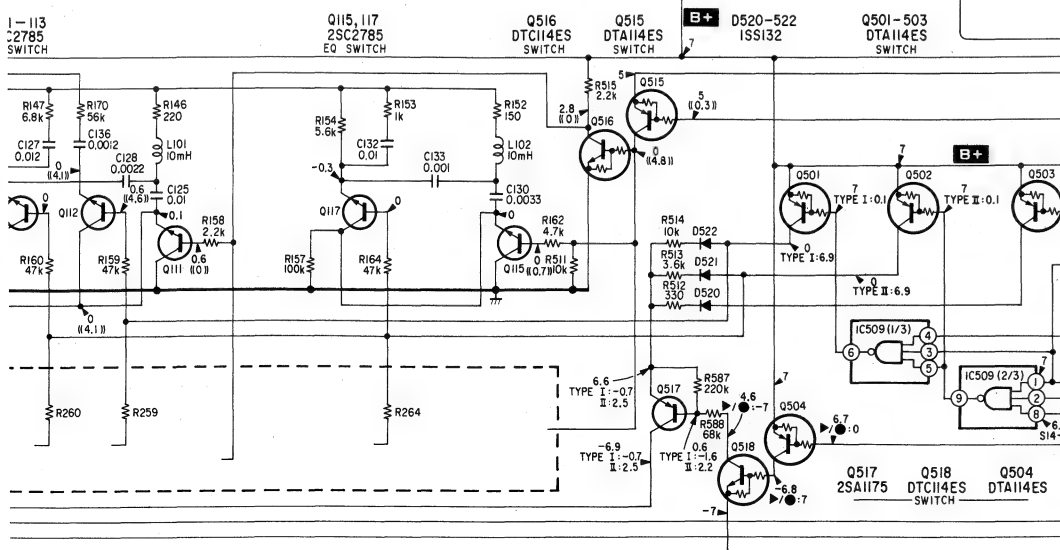
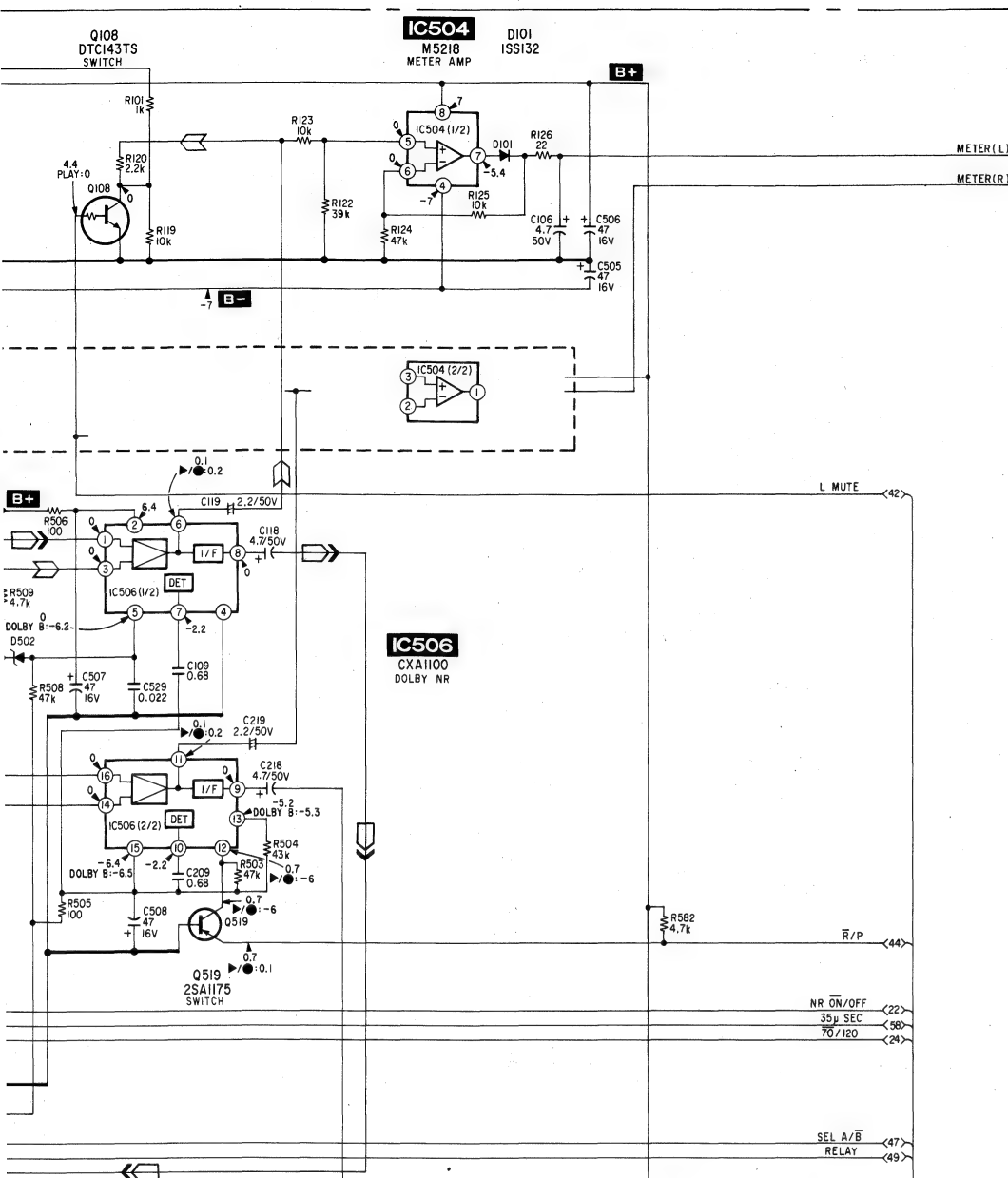


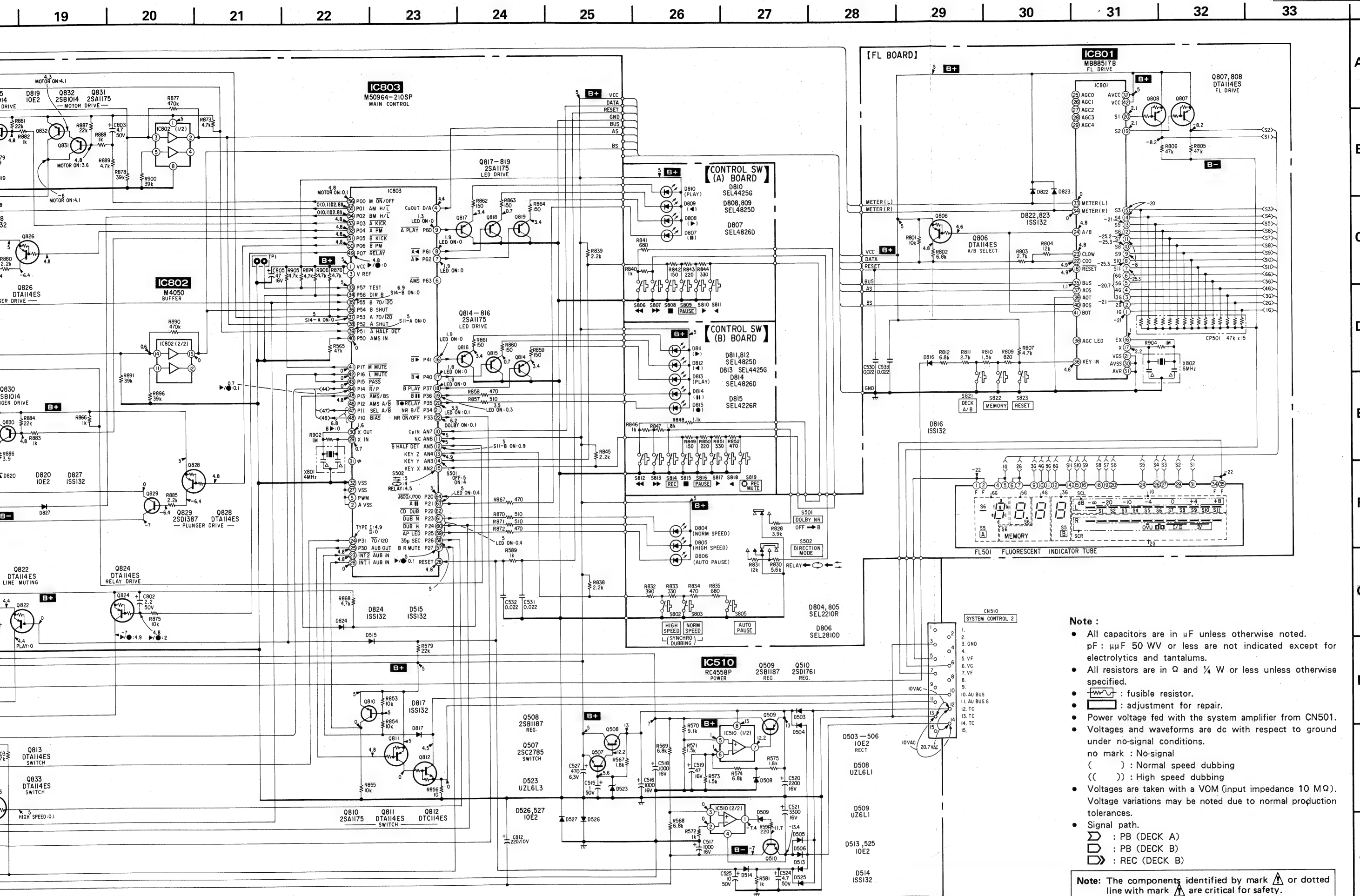




5-2. SCHEMATIC DIAGRAM







Note:

- All capacitors are in μF unless otherwise noted.
pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- \square : fusible resistor.
- \square : adjustment for repair.
- Power voltage fed with the system amplifier from CN501.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: No-signal
(): Normal speed dubbing
(): High speed dubbing
- Voltages are taken with a VOM (input impedance 10 M Ω).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 - \square : PB (DECK A)
 - \square : PB (DECK B)
 - \square : REC (DECK B)

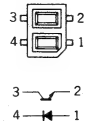
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

● Semiconductor Lead Layouts

DTC143TS
2SA1348
2SC3402



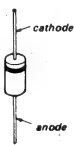
GP2S09-B



2SA1175HFE
2SC2785HFE



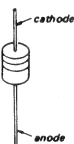
US1060M
1SS132
10E2N



2SB1014



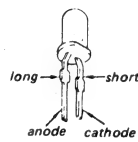
HZS6A1L
HZS6C3L
UZL-6L2



2SB1187F



SEL2210R
SEL2810D-D



2SC2001-L
2SD1387
2SD1388



SEL4425G-C
SEL4826D-C



2SD1761E



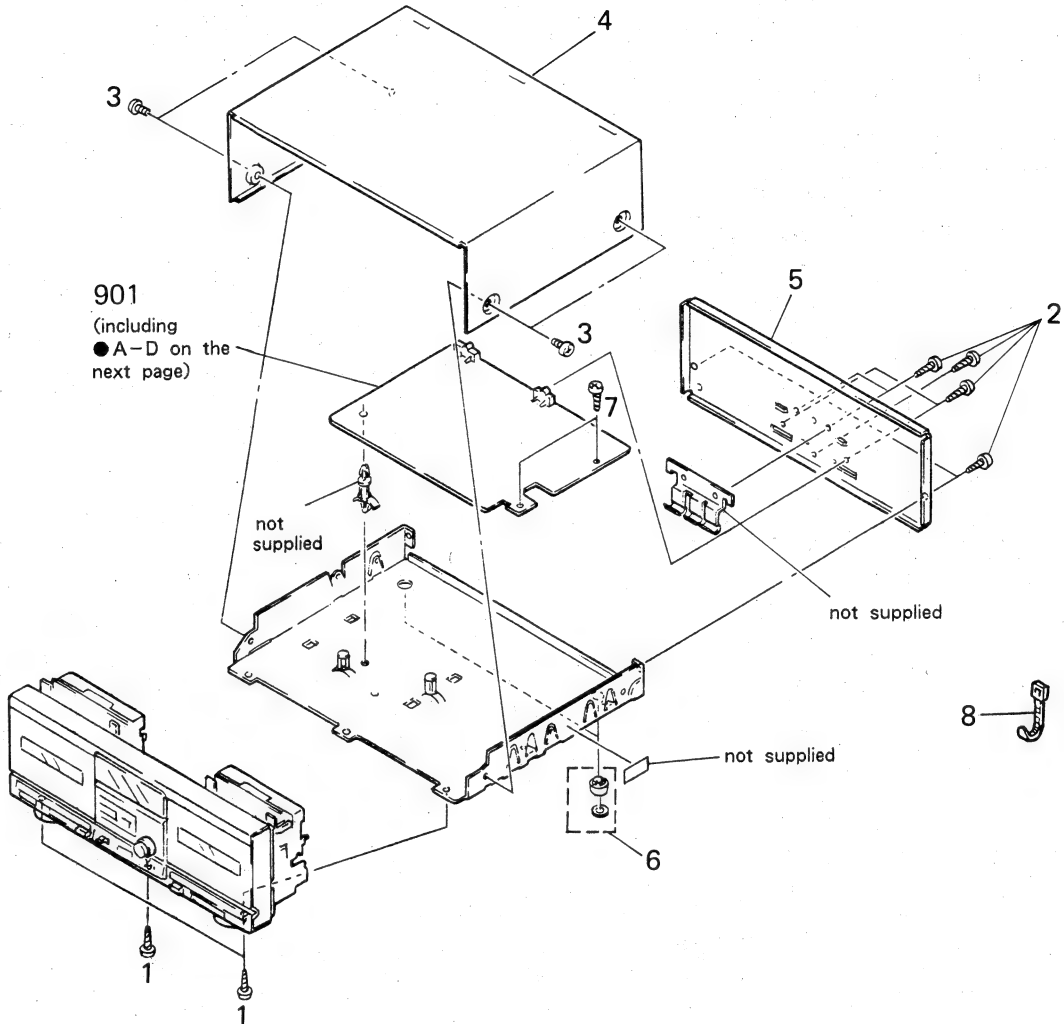
SECTION 6
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts' Color

(1) CASE, REAR PANEL SECTION

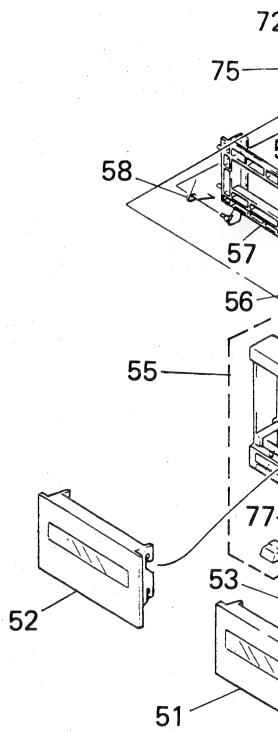


| No. | Part No. | Description |
|-----|---------------|---------------------|
| 1 | 7-682-547-09 | SCREW +BVTT 3X6 (S) |
| 2 | 7-682-547-04 | SCREW +BVTT 3X6 (S) |
| 3 | 3-704-366-01 | SCREW (CASE) (M3X8) |
| 4 | 4-919-379-02 | CASE |
| 5 | *3-343-685-31 | PANEL, BACK |

| No. | Part No. | Description |
|-------|---------------|-----------------------------|
| 6 | X-4917-254-1 | FOOT ASSY |
| 7 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S |
| 8 | *3-337-402-01 | BAND, BINDING |
| 901 | *A-2006-069-A | MOUNTED PCB, AUDIO |
| FL501 | 1-519-552-11 | INDICATOR TUBE, FLUORESCENT |

(2) FRONT PANEL SECTION

- A : Control Switch
- B : Control Switch
- C : FL Board
- D : REC VOL Board



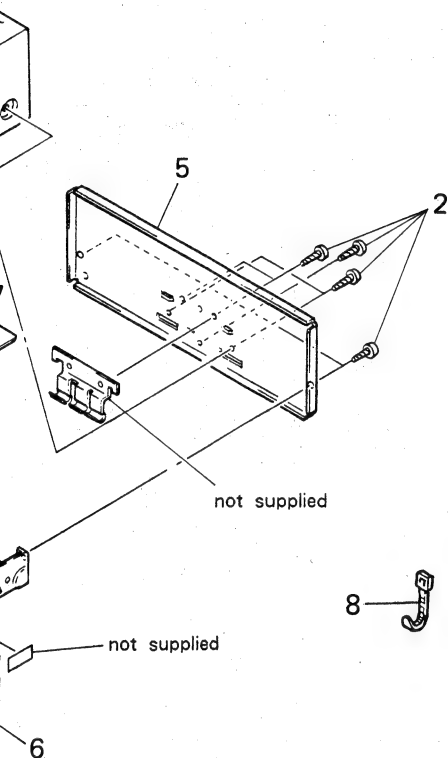
| No. | Part No. | Description |
|-----|---------------|-------------|
| 51 | 3-343-686-51 | LID, C |
| 52 | 3-343-686-41 | LID, C |
| 53 | 3-343-633-01 | KNOB (I |
| 54 | 3-343-634-01 | KNOB (I |
| 55 | X-3343-634-1 | PANEL |
| 56 | 3-343-688-01 | SPRING |
| 57 | X-3343-628-1 | HOLDER |
| 58 | 3-343-687-01 | SPRING |
| 59 | *3-340-123-01 | RETAIN |
| 60 | *X-3343-624-1 | BRACKE |
| 61 | 7-624-105-04 | STOP R |
| 62 | 3-343-689-01 | SPRING |
| 63 | *X-3343-625-1 | BRACKE |
| 64 | X-3332-464-1 | GEAR (|

on, parts with part
and -X may be dif-
ts specified in the
the set.

Appearance Parts

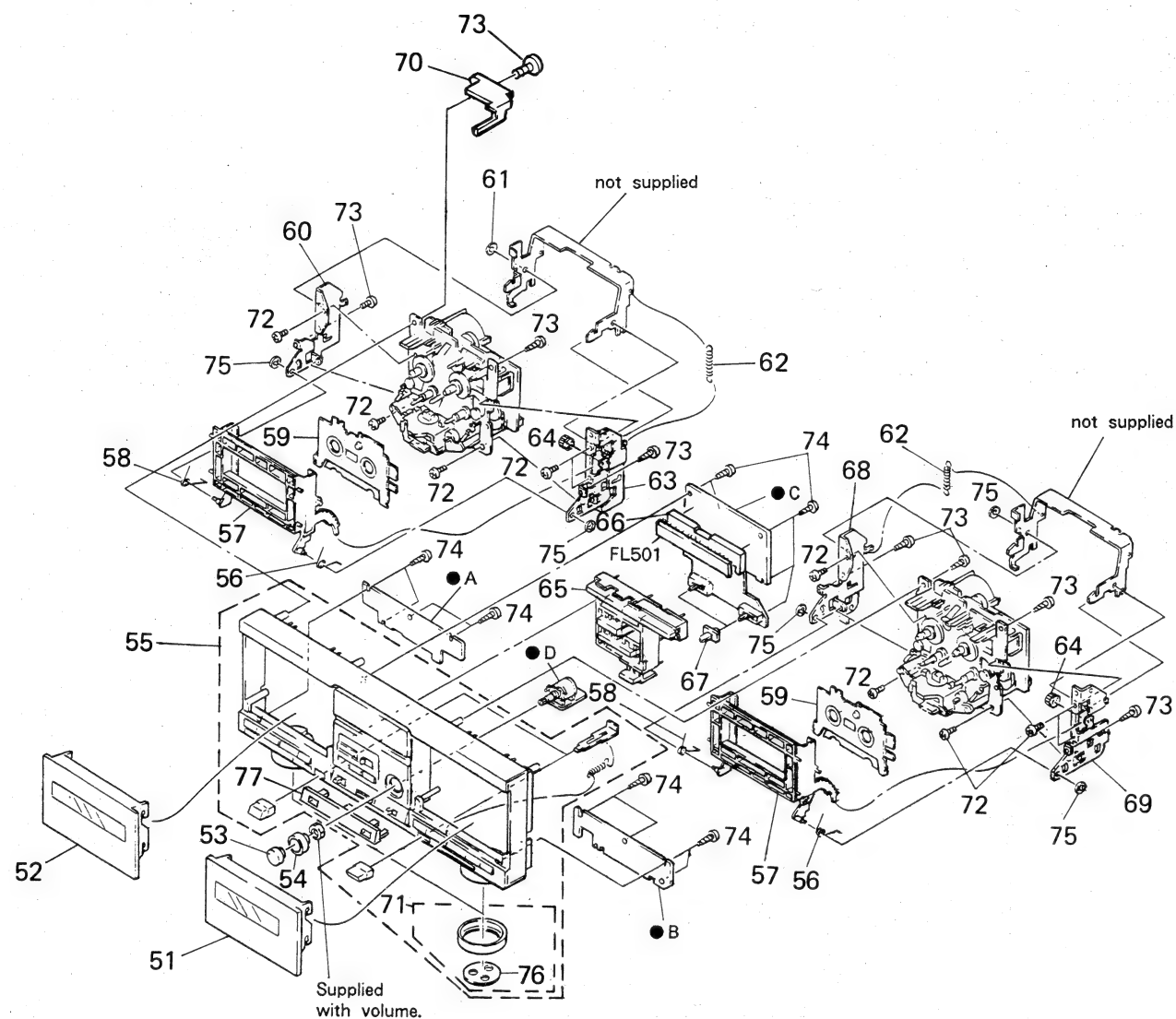
ALANCE (WHITE)

↑
Parts' Color



(2) FRONT PANEL SECTION

- A : Control Switch (A) Board
- B : Control Switch (B) Board
- C : FL Board
- D : REC VOL Board

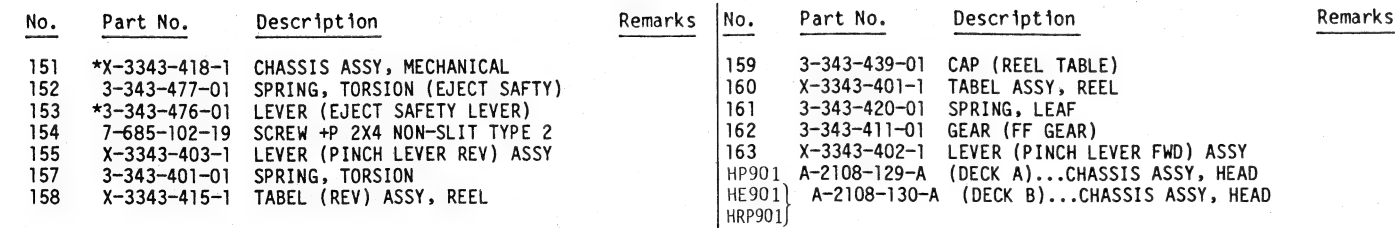


| Part No. | Description | Remarks |
|------------|-----------------------------|---------|
| 4917-254-1 | FOOT ASSY | |
| 685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| 337-402-01 | BAND, BINDING | |
| 2006-069-A | MOUNTED PCB, AUDIO | |
| 519-552-11 | INDICATOR TUBE, FLUORESCENT | |

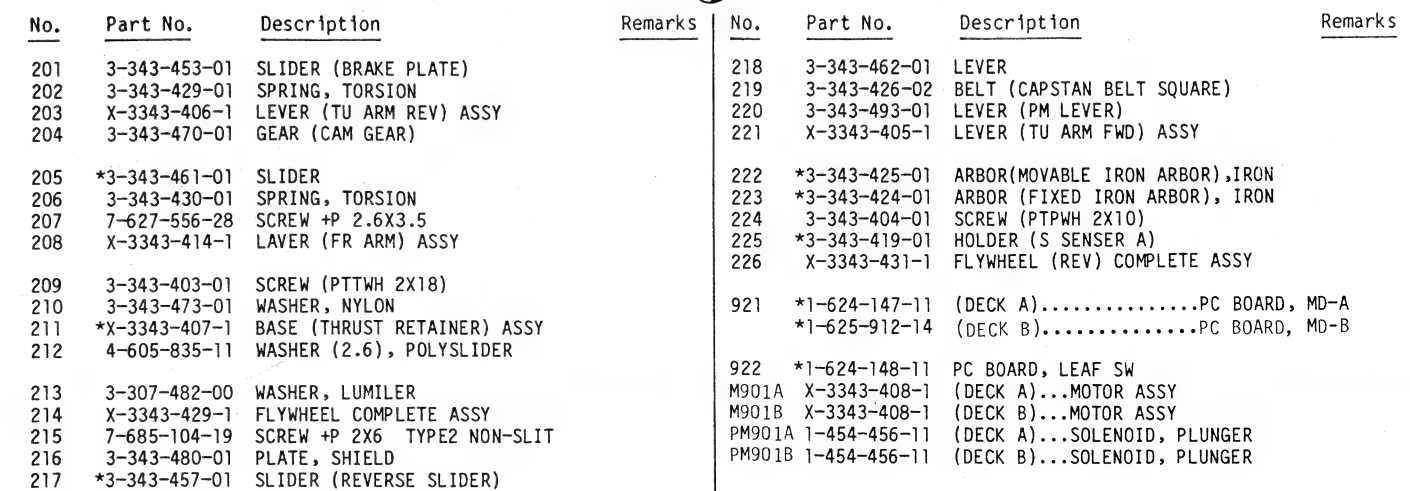
| No. | Part No. | Description | Remarks |
|-----|---------------|------------------------|----------|
| 51 | 3-343-686-51 | LID, CASSETTE (DECK B) | |
| 52 | 3-343-686-41 | LID, CASSETTE (DECK A) | |
| 53 | 3-343-633-01 | KNOB (R-21) | |
| 54 | 3-343-634-01 | KNOB (L-23) | |
| 55 | X-3343-634-1 | PANEL ASSY, FRONT | 71,76,77 |
| 56 | 3-343-688-01 | SPRING (LOADING RIGHT) | |
| 57 | X-3343-628-1 | HOLDER ASSY, CASSETTE | |
| 58 | 3-343-687-01 | SPRING (LOADING LEFT) | |
| 59 | *3-340-123-01 | RETAINER, CASSETTE | |
| 60 | *X-3343-624-1 | BRACKET (LA) ASSY | |
| 61 | 7-624-105-04 | STOP RING 2.3, TYPE -E | |
| 62 | 3-343-689-01 | SPRING, TENSION | |
| 63 | *X-3343-625-1 | BRACKET (RA) ASSY | |
| 64 | X-3332-464-1 | GEAR (DAMPER) ASSY | |

| No. | Part No. | Description | Remarks |
|-----|---------------|-------------------------------|---------|
| 65 | 3-343-695-21 | BUTTON (C) | |
| 66 | *3-350-116-02 | HOLDER (FL) | |
| 67 | 4-924-444-11 | KNOB (TIMER) | |
| 68 | *X-3343-626-1 | BRACKET (LB) ASSY | |
| 69 | *X-3343-627-1 | BRACKET (RB) ASSY | |
| 70 | *3-350-117-01 | REINFORCEMENT (FP) | |
| 71 | X-4917-252-1 | PLATE (LEG) ASSY, ORNAMENTAL | 76 |
| 72 | 7-621-770-87 | SCREW +BVTT 2.6X5 (S) | |
| 73 | 7-685-134-19 | SCREW +P 2.6X8 TYPE2 NON-SLIT | |
| 74 | 7-685-533-11 | SCREW +BTP 2.6X6 TYPE2 N-S | |
| 75 | 7-624-190-31 | STOP RING 4, TYPE-CS | |
| 76 | 4-928-401-01 | FELT | |
| 77 | 3-350-132-01 | ESCUTCHEON | |

DECK A : TCM-170RA1
DECK B : TCM-170RB18



DECK A : TCM-170RA1
DECK B : TCM-170RB18



SECTION 7

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA....: μ A...., UPA....: μ PA....,UPC....: μ PC, UPD....: μ PD....

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|---------------|---------------------------|---------|--------------|-----------------------|
| 901 | *A-2006-069-A | MOUNTED PCB, AUDIO | C107 | 1-136-156-00 | FILM 0.018MF 5% 50V |
| 921 | *1-624-147-11 | (DECK A)...PC BOARD, MD-A | C109 | 1-136-175-00 | FILM 0.68MF 5% 50V |
| | *1-625-912-14 | (DECK B)...PC BOARD, MD-B | C118 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| 922 | *1-624-148-11 | PC BOARD, LEAF SW | C119 | 1-124-767-00 | ELECT 2.2MF 20% 50V |
| C41A | 1-162-289-31 | CERAMIC 390PF 10% 50V | C121 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C41B | 1-110-342-11 | MYLAR 390PF 5% 50V | C122 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C42A | 1-136-157-00 | FILM 0.022MF 5% 50V | C123 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C42B | 1-136-157-00 | FILM 0.022MF 5% 50V | C124 | 1-136-159-00 | FILM 0.033MF 5% 50V |
| C43A | 1-124-282-00 | ELECT 22MF 20% 25V | C125 | 1-130-483-00 | MYLAR 0.01MF 5% 50V |
| C43B | 1-124-282-00 | ELECT 22MF 20% 25V | C127 | 1-136-154-00 | FILM 0.012MF 5% 50V |
| C44B | 1-162-288-31 | CERAMIC 330PF 10% 50V | C128 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C45B | 1-136-273-91 | FILM 75PF 5% 630V | C130 | 1-130-477-00 | MYLAR 0.0033MF 5% 50V |
| C47B | 1-162-209-31 | CERAMIC 27PF 5% 50V | C132 | 1-130-483-00 | MYLAR 0.01MF 5% 50V |
| C48A | 1-162-217-31 | CERAMIC 56PF 5% 50V | C133 | 1-130-471-00 | MYLAR 0.001MF 5% 50V |
| C48B | 1-162-217-31 | CERAMIC 56PF 5% 50V | C135 | 1-136-156-00 | FILM 0.018MF 5% 50V |
| C61A | 1-162-289-31 | CERAMIC 390PF 10% 50V | C136 | 1-130-472-00 | MYLAR 0.0012MF 5% 50V |
| C61B | 1-110-342-11 | MYLAR 390PF 5% 50V | C138 | 1-162-285-31 | CERAMIC 180PF 10% 50V |
| C62A | 1-136-157-00 | FILM 0.022MF 5% 50V | C201 | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C62B | 1-136-157-00 | FILM 0.022MF 5% 50V | C202 | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C63A | 1-124-282-00 | ELECT 22MF 20% 25V | C204 | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C63B | 1-124-282-00 | ELECT 22MF 20% 25V | C206 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C64B | 1-162-288-31 | CERAMIC 330PF 10% 50V | C207 | 1-136-156-00 | FILM 0.018MF 5% 50V |
| C65B | 1-136-273-91 | FILM 75PF 5% 630V | C209 | 1-136-175-00 | FILM 0.68MF 5% 50V |
| C67B | 1-162-209-31 | CERAMIC 27PF 5% 50V | C218 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C68A | 1-162-217-31 | CERAMIC 56PF 5% 50V | C219 | 1-124-767-00 | ELECT 2.2MF 20% 50V |
| C68B | 1-162-217-31 | CERAMIC 56PF 5% 50V | C221 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C81A | 1-126-101-11 | ELECT 100MF 20% 16V | C222 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C81B | 1-126-101-11 | ELECT 100MF 20% 16V | C223 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C82A | 1-126-101-11 | ELECT 100MF 20% 16V | C224 | 1-136-159-00 | FILM 0.033MF 5% 50V |
| C82B | 1-126-101-11 | ELECT 100MF 20% 16V | C225 | 1-130-483-00 | MYLAR 0.01MF 5% 50V |
| C83B | 1-124-499-11 | ELECT 1MF 20% 50V | C227 | 1-136-154-00 | FILM 0.012MF 5% 50V |
| C84B | 1-124-925-11 | ELECT 2.2MF 20% 50V | C228 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C85B | 1-130-480-00 | MYLAR 0.0056MF 5% 50V | C230 | 1-130-477-00 | MYLAR 0.0033MF 5% 50V |
| C86B | 1-130-476-00 | MYLAR 0.0027MF 5% 50V | C232 | 1-130-483-00 | MYLAR 0.01MF 5% 50V |
| C87B | 1-130-476-00 | MYLAR 0.0027MF 5% 50V | C233 | 1-130-471-00 | MYLAR 0.001MF 5% 50V |
| C88B | 1-136-562-11 | FILM 0.0082MF 5% 630V | C235 | 1-136-156-00 | FILM 0.018MF 5% 50V |
| C89B | 1-161-494-00 | CERAMIC 0.022MF 25V | C236 | 1-130-472-00 | MYLAR 0.0012MF 5% 50V |
| C90B | 1-126-101-11 | ELECT 100MF 20% 16V | C238 | 1-162-285-31 | CERAMIC 180PF 10% 50V |
| C101 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C501 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C102 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C502 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C104 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C505 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C106 | 1-124-927-11 | ELECT 4.7MF 20% 50V | C507 | 1-124-477-11 | ELECT 47MF 20% 16V |
| | | | C508 | 1-124-477-11 | ELECT 47MF 20% 16V |
| | | | C509 | 1-124-477-11 | ELECT 47MF 20% 16V |

| Ref.No. | Part No. | Description |
|---------|----------|-------------|
|---------|----------|-------------|

| | | |
|--------|---------------|---|
| C510 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C515 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C516 | 1-124-360-00 | ELECT 1000MF 20% 16V |
| C517 | 1-124-360-00 | ELECT 1000MF 20% 16V |
| C518 | 1-124-360-00 | ELECT 1000MF 20% 16V |
| C519 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C520 | 1-124-556-11 | ELECT 2200MF 20% 16V |
| C521 | 1-124-887-00 | ELECT 3300MF 20% 16V |
| C524 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C525 | 1-123-875-11 | ELECT 10MF 20% 50V |
| C526 | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C527 | 1-124-472-11 | ELECT 470MF 20% 6.3V |
| C529 | 1-161-494-00 | CERAMIC 0.022MF 25V |
| C530 | 1-161-494-00 | CERAMIC 0.022MF 25V |
| C531 | 1-161-494-00 | CERAMIC 0.022MF 25V |
| C532 | 1-161-494-00 | CERAMIC 0.022MF 25V |
| C533 | 1-161-494-00 | CERAMIC 0.022MF 25V |
| C801 | 1-126-176-11 | ELECT 220MF 20% 10V |
| C802 | 1-124-925-11 | ELECT 2.2MF 20% 50V |
| C803 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C805 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C812 | 1-126-176-11 | ELECT 220MF 20% 10V |
| CN501 | *1-564-340-00 | PIN, CONNECTOR 6P |
| CN502 | *1-564-336-00 | PIN, CONNECTOR 2P |
| CN503 | *1-564-342-11 | PIN, CONNECTOR 8P |
| CN504 | *1-564-338-00 | PIN, CONNECTOR 4P |
| CN505 | *1-564-342-61 | PIN, CONNECTOR 8P |
| CN506 | *1-564-341-71 | PIN, CONNECTOR 7P |
| CN507 | *1-564-342-11 | PIN, CONNECTOR 8P |
| CN510 | *1-566-859-11 | SOCKET, CONNECTOR 15P(SYSTEM CONTROL 2) |
| CN511 | *1-566-858-11 | SOCKET, CONNECTOR 11P(SYSTEM CONTROL 1) |
| CNP11A | *1-564-501-11 | PIN, CONNECTOR 8P |
| CNP11B | *1-564-501-11 | PIN, CONNECTOR 8P |
| CNP12A | *1-564-337-00 | PIN, CONNECTOR 3P |
| CNP12B | *1-564-337-61 | PIN, CONNECTOR 3P |
| CNP13A | *1-564-707-11 | PIN, CONNECTOR (SMALL TYPE) 5P |
| CNP13B | *1-564-707-11 | PIN, CONNECTOR (SMALL TYPE) 5P |
| CNP81A | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CNP81B | *1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P |
| CNP82A | *1-564-339-00 | PIN, CONNECTOR 5P |
| CNP82B | *1-564-339-61 | PIN, CONNECTOR 5P |
| CNP83B | *1-564-338-61 | PIN, CONNECTOR 4P |
| CP501 | 1-233-167-11 | COMPOSITION CIRCUIT BLOCK |
| D11A | 8-719-107-94 | DIODE 1SS132 |
| D11B | 8-719-107-94 | DIODE 1SS132 |
| D81B | 8-719-107-94 | DIODE 1SS132 |
| D101 | 8-719-000-26 | DIODE US1060M |
| D201 | 8-719-000-26 | DIODE US1060M |
| D502 | 8-719-933-41 | DIODE HZS6C3L |
| D503 | 8-719-200-77 | DIODE 10E2N |
| D504 | 8-719-200-77 | DIODE 10E2N |
| D505 | 8-719-200-77 | DIODE 10E2N |
| D506 | 8-719-200-77 | DIODE 10E2N |
| D508 | 8-719-900-33 | DIODE HZL-6L2 |

| Ref.No. | Part No. | Description |
|---------|----------|-------------|
|---------|----------|-------------|

| | | |
|--------|--------------|-------------------------------|
| D509 | 8-719-900-33 | DIODE HZL-6L2 |
| D513 | 8-719-200-77 | DIODE 10E2N |
| D514 | 8-719-000-26 | DIODE US1060M |
| D515 | 8-719-000-26 | DIODE US1060M |
| D520 | 8-719-000-26 | DIODE US1060M |
| D521 | 8-719-000-26 | DIODE US1060M |
| D522 | 8-719-000-26 | DIODE US1060M |
| D523 | 8-719-000-51 | DIODE UZL-6L2 |
| D525 | 8-719-200-77 | DIODE 10E2N |
| D526 | 8-719-200-77 | DIODE 10E2N |
| D527 | 8-719-200-77 | DIODE 10E2N |
| D804 | 8-719-300-71 | DIODE SEL2210R |
| D805 | 8-719-300-71 | DIODE SEL2210R |
| D806 | 8-719-311-61 | DIODE SEL2810D-D |
| D807 | 8-719-312-29 | DIODE SEL4826D-C |
| D808 | 8-719-311-70 | DIODE SEL4825D-C |
| D809 | 8-719-311-70 | DIODE SEL4825D-C |
| D810 | 8-719-304-96 | DIODE SEL4425G-C |
| D811 | 8-719-311-70 | DIODE SEL4825D-C |
| D812 | 8-719-311-70 | DIODE SEL4825D-C |
| D813 | 8-719-304-96 | DIODE SEL4425G-C |
| D814 | 8-719-312-29 | DIODE SEL4826D-C |
| D815 | 8-719-312-30 | DIODE SEL4226R-C |
| D816 | 8-719-000-26 | DIODE US1060M |
| D817 | 8-719-000-26 | DIODE US1060M |
| D818 | 8-719-200-77 | DIODE 10E2N |
| D819 | 8-719-200-77 | DIODE 10E2N |
| D820 | 8-719-200-77 | DIODE 10E2N |
| D822 | 8-719-000-26 | DIODE US1060M |
| D823 | 8-719-000-26 | DIODE US1060M |
| D824 | 8-719-000-26 | DIODE US1060M |
| D827 | 8-719-000-26 | DIODE US1060M |
| D828 | 8-719-000-26 | DIODE US1060M |
| FL501 | 1-519-552-11 | INDICATOR TUBE, FLUORESCENT |
| HE901 | A-2108-130-A | (DECK B)...CHASSIS ASSY, HEAD |
| HRP901 | | |
| HP901 | A-2108-129-A | (DECK A)...CHASSIS ASSY, HEAD |
| IC81A | 8-759-111-44 | IC UPC4570C-1 |
| IC81B | 8-759-111-44 | IC UPC4570C-1 |
| IC501 | 8-759-601-02 | IC M5218P |
| IC504 | 8-759-601-02 | IC M5218P |
| IC505 | 8-759-040-53 | IC MC14053BCP |
| IC506 | 8-752-031-67 | IC CXA1100P |
| IC507 | 8-759-601-02 | IC M5218P |
| IC509 | 8-759-601-23 | IC M4023BP |
| IC510 | 8-759-945-58 | IC RC4558P |
| IC801 | 8-759-983-68 | IC MB88517B-1023N |
| IC802 | 8-759-601-38 | IC M4050BP |
| IC803 | 8-759-633-22 | IC M50964-210SP |
| L41B | 1-410-780-11 | INDUCTOR 27MMH |
| L61B | 1-410-780-11 | INDUCTOR 27MMH |
| L101 | 1-410-775-21 | INDUCTOR 10MMH |
| L102 | 1-410-775-21 | INDUCTOR 10MMH |
| L201 | 1-410-775-21 | INDUCTOR 10MMH |
| L202 | 1-410-775-21 | INDUCTOR 10MMH |

| Ref.No. | Part No. | Description |
|---------|--------------|------------------------------|
| LPF101 | 1-236-087-11 | FILTER, LOW PASS |
| LPF201 | 1-236-087-11 | FILTER, LOW PASS |
| M901A | X-3343-408-1 | (DECK A)...MOTOR ASSY |
| M901B | X-3343-408-1 | (DECK B)...MOTOR ASSY |
| PM901A | 1-454-456-11 | (DECK A)...SOLENOID, PLUNGER |
| PM901B | 1-454-456-11 | (DECK B)...SOLENOID, PLUNGER |
| Q11A | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q11B | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q12A | 8-719-939-23 | ?TRANSISTOR GP2S09-C |
| Q12B | 8-719-939-23 | ?TRANSISTOR GP2S09-C |
| Q81B | 8-729-111-29 | TRANSISTOR 2SD1388 |
| Q82B | 8-729-100-12 | TRANSISTOR 2SC2001-L |
| Q83B | 8-729-100-12 | TRANSISTOR 2SC2001-L |
| Q108 | 8-729-900-74 | TRANSISTOR DTC143TS |
| Q109 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q110 | 8-729-900-74 | TRANSISTOR DTC143TS |
| Q111 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q112 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q113 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q115 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q117 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q119 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q208 | 8-729-900-74 | TRANSISTOR DTC143TS |
| Q209 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q210 | 8-729-900-74 | TRANSISTOR DTC143TS |
| Q211 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q212 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q213 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q215 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q217 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q219 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q501 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q502 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q503 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q504 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q507 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q508 | 8-729-920-91 | TRANSISTOR 2SB1187-F |
| Q509 | 8-729-920-91 | TRANSISTOR 2SB1187-F |
| Q510 | 8-729-808-76 | TRANSISTOR 2SD1761-E |
| Q515 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q516 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q517 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q518 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q519 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q806 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q807 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q808 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q810 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q811 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q812 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q813 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q814 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q815 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q816 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q817 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |

| Ref.No. | Part No. | Description |
|---------|--------------|------------------------|
| Q818 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q819 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q822 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q824 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q825 | 8-729-802-22 | TRANSISTOR 2SB1014 |
| Q826 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q827 | 8-729-801-93 | TRANSISTOR 2SD1387 |
| Q828 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q829 | 8-729-801-93 | TRANSISTOR 2SD1387 |
| Q830 | 8-729-802-22 | TRANSISTOR 2SB1014 |
| Q831 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q832 | 8-729-802-22 | TRANSISTOR 2SB1014 |
| Q833 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| R11B | 1-247-834-11 | CARBON 1.3K 5% 1/4W |
| R12B | 1-249-414-11 | CARBON 560 5% 1/4W |
| R13B | 1-247-818-11 | CARBON 300 5% 1/4W |
| R14A | 1-249-408-11 | CARBON 180 5% 1/4W |
| R14B | 1-249-408-11 | CARBON 180 5% 1/4W |
| R17A | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R17B | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R18A | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R18B | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R41A | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R41B | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R42A | 1-249-405-11 | CARBON 100 5% 1/4W |
| R42B | 1-249-405-11 | CARBON 100 5% 1/4W |
| R43A | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R43B | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R44A | 1-249-426-11 | CARBON 5.6K 5% 1/4W |
| R44B | 1-249-426-11 | CARBON 5.6K 5% 1/4W |
| R45B | 1-249-430-11 | CARBON 12K 5% 1/4W |
| R61A | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R61B | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R62A | 1-249-405-11 | CARBON 100 5% 1/4W |
| R62B | 1-249-405-11 | CARBON 100 5% 1/4W |
| R63A | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R63B | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R64A | 1-249-426-11 | CARBON 5.6K 5% 1/4W |
| R64B | 1-249-426-11 | CARBON 5.6K 5% 1/4W |
| R65B | 1-249-430-11 | CARBON 12K 5% 1/4W |
| R81A | 1-249-409-11 | CARBON 220 5% 1/4W |
| R81B | 1-249-409-11 | CARBON 220 5% 1/4W |
| R82A | 1-249-409-11 | CARBON 220 5% 1/4W |
| R82B | 1-249-409-11 | CARBON 220 5% 1/4W |
| R83B | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R84B | 1-212-849-00 | FUSIBLE 4.7 5% 1/4W F |
| R85B | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R86B | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R101 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R102 | 1-249-436-11 | CARBON 39K 5% 1/4W |
| R103 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R104 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R105 | 1-249-433-11 | CARBON 22K 5% 1/4W |

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|----------|-------------|
|---------|----------|-------------|

| | | | | | |
|------|--------------|--------|------|----|------|
| R106 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R112 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R113 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R119 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R120 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R122 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R123 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R124 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R125 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R126 | 1-249-397-11 | CARBON | 22 | 5% | 1/4W |
| R128 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R129 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R130 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R138 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R139 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R140 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R141 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R142 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R143 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R144 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R145 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R146 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R147 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R148 | 1-247-848-11 | CARBON | 5.1K | 5% | 1/4W |
| R151 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R152 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R153 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R154 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R157 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R158 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R159 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R160 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R162 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R164 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R167 | 1-247-840-00 | CARBON | 2.4K | 5% | 1/4W |
| R168 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R170 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R171 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R201 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R202 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R203 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R204 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R205 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R206 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R212 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R213 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R219 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R220 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R222 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R223 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R224 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R225 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R226 | 1-249-397-11 | CARBON | 22 | 5% | 1/4W |
| R228 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R229 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R230 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R238 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |

| Ref.No. | Part No. | Description |
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|------|--------------|--------|------|----|------|
| R239 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R240 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R241 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R242 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R243 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R244 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R245 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R246 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R247 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R248 | 1-247-848-11 | CARBON | 5.1K | 5% | 1/4W |
| R251 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R252 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R253 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R254 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R257 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R258 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R259 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R260 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R262 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R264 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R267 | 1-247-840-00 | CARBON | 2.4K | 5% | 1/4W |
| R268 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R270 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R271 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R502 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R503 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R504 | 1-215-460-00 | METAL | 43K | 1% | 1/6W |
| R505 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R506 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R508 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R509 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R510 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R511 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R512 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R513 | 1-247-844-11 | CARBON | 3.6K | 5% | 1/4W |
| R514 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R515 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R552 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R565 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R567 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R568 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R569 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R570 | 1-247-854-11 | CARBON | 9.1K | 5% | 1/4W |
| R571 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R572 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R573 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R574 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R575 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R579 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R581 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R582 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R585 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R586 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R587 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R588 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R589 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R590 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |

| Ref.No. | Part No. | Description | | | |
|---------|--------------|-------------|------|----|------|
| R591 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R801 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R802 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R803 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W |
| R804 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R805 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R806 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R807 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R809 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R810 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R811 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W |
| R812 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R828 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R830 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R831 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R832 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R833 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R834 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R835 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R838 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R839 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R840 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R841 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R842 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R843 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R844 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R845 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R846 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R847 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R848 | 1-247-832-11 | CARBON | 1.1K | 5% | 1/4W |
| R849 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R850 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R851 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R852 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R853 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R854 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R855 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R856 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R857 | 1-249-442-11 | CARBON | 510 | 5% | 1/4W |
| R858 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R859 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R860 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R861 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R862 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R863 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |

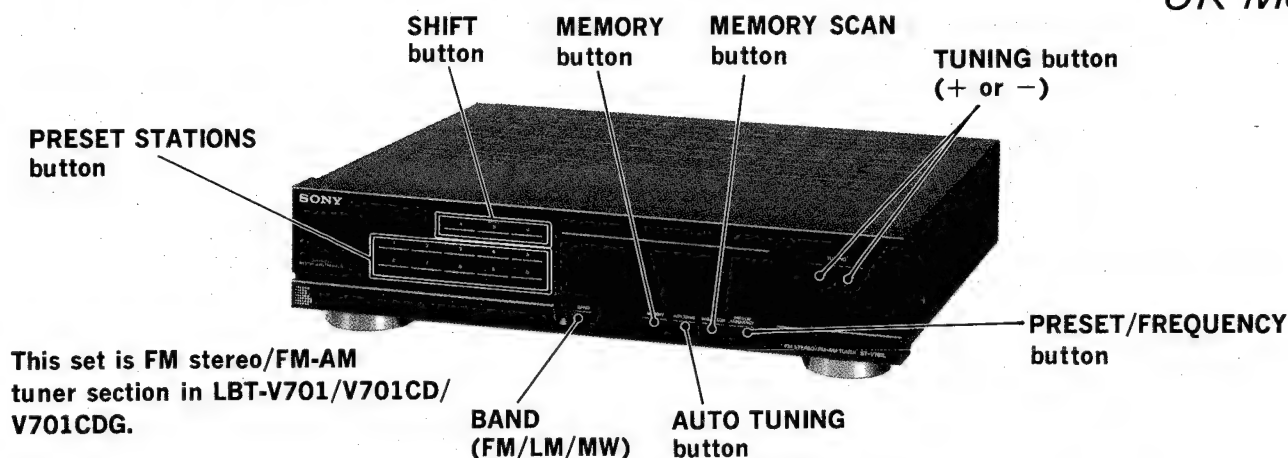
| Ref.No. | Part No. | Description | | | |
|---------|--------------|------------------|---------------------|----|------|
| R864 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R866 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R867 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R868 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R870 | 1-249-442-11 | CARBON | 510 | 5% | 1/4W |
| R871 | 1-249-442-11 | CARBON | 510 | 5% | 1/4W |
| R872 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R873 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R874 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R875 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R876 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R877 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R878 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R879 | 1-249-388-11 | CARBON | 3.9 | 5% | 1/4W |
| R880 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R881 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R882 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R883 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R884 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R885 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R886 | 1-249-388-11 | CARBON | 3.9 | 5% | 1/4W |
| R887 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R888 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R889 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R890 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R891 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R896 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R900 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R902 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R903 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R904 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R905 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R906 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| RV41A | 1-228-989-00 | RES, ADJ, CARBON | 470 | | |
| RV41B | 1-228-989-00 | RES, ADJ, CARBON | 470 | | |
| RV42B | 1-230-500-11 | RES, ADJ, CARBON | 220K | | |
| RV61A | 1-228-989-00 | RES, ADJ, CARBON | 470 | | |
| RV61B | 1-228-989-00 | RES, ADJ, CARBON | 470 | | |
| RV62B | 1-230-500-11 | RES, ADJ, CARBON | 220K | | |
| RV102 | 1-228-994-00 | RES, ADJ, CARBON | 10K | | |
| RV202 | 1-228-994-00 | RES, ADJ, CARBON | 10K | | |
| RV501 | 1-238-300-11 | RES, VAR, CARBON | 10K/10K (REC LEVEL) | | |
| RY81B | 1-515-614-11 | RELAY | | | |

| Ref.No. | Part No. | Description |
|---------|---------------|-------------------------------------|
| S11A | 1-571-281-21 | SWITCH, LEAF (HALF DET) |
| S11B | 1-571-281-21 | SWITCH, LEAF (HALF DET) |
| S12B | 1-571-281-21 | SWITCH, LEAF (SIDE A ERASE PROOF) |
| S13B | 1-571-281-21 | SWITCH, LEAF (SIDE B ERASE PROOF) |
| S14A | 1-571-281-21 | SWITCH, LEAF (CrO2) |
| S14B | 1-571-281-21 | SWITCH, LEAF (CrO2) |
| S501 | 1-570-974-11 | SWITCH, SLIDE (DOLBY NR) |
| S502 | 1-571-520-21 | SWITCH, SLIDE (DIRECTION MODE) |
| S802 | 1-554-303-21 | SWITCH, KEY BOARD (HIGH SPEED) |
| S803 | 1-554-303-21 | SWITCH, KEY BOARD (NORMAL SPEED) |
| S805 | 1-554-303-21 | SWITCH, KEY BOARD (AUTO PAUSE) |
| S806 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A: ◀◀) |
| S807 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A: ▶▶) |
| S808 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A: ■) |
| S809 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A PAUSE) |
| S810 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A: ▶) |
| S811 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A: ◀) |
| S812 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B: ◀◀) |
| S813 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B: ▶▶) |
| S814 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B REC) |
| S815 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B: ■) |
| S816 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B PAUSE) |
| S817 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B: ▶) |
| S818 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B: ◀) |
| S819 | 1-554-303-21 | SWITCH, KEY BOARD (DECK B REC MUTE) |
| S821 | 1-554-303-21 | SWITCH, KEY BOARD (DECK A/B) |
| S822 | 1-554-303-21 | SWITCH, KEY BOARD (MEMORY) |
| S823 | 1-554-303-21 | SWITCH, KEY BOARD (RESET) |
| T81B | 1-433-337-11 | TRANSFORMER, BIAS OSCILLATION |
| TP1 | *1-564-336-00 | PIN, CONNECTOR 2P |
| X801 | 1-577-358-21 | VIBRATOR, CERAMIC 4MHz |
| X802 | 1-577-360-11 | VIBRATOR, CERAMIC 6MHz |

ST-V701L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Tuner

System FM stereo, FM/AM Superheterodyne tuner

FM tuner section



Tuning range 87.5 to 108 MHz
Antenna terminals 75 ohms unbalanced
Intermediate frequency 10.7 MHz

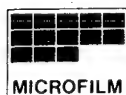
MW/LW tuner section

| | MW | LW |
|------------------------|---|---|
| Tuning range | 522 to 1,611 kHz (Italian model) 531 to 1,602 kHz (AEP, UK, West Germany model) | 144 to 288 kHz (Italian model) 153 to 281 kHz (AEP, UK, West Germany model) |
| Antenna | AM loop antenna, External antenna terminal | |
| Intermediate frequency | 450 kHz | |

Dimensions Approx. 355 × 82 × 320 mm (w/h/d)
(14 × 3 1/4 × 12 5/8 inches)
Incl. projecting parts and controls
Weight Approx. 1.9 kg (4 lb 3 oz)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

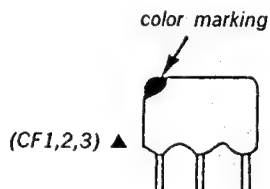


FM STEREO/FM-AM TUNER
SONY®

SECTION 1 SERVICING NOTES

Note on Ceramic Filter (CF1,2,3) ▲ Replacement.

This set employs three ceramic filters (CF1,2,3) ▲ which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by * D613, * D614 is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



○ : Mounted
× : not Mounted

| Ceramic filter | | Mount | | FM intermediate frequency (MHz) |
|----------------|------------------------|--------|--------|---------------------------------|
| Color mark | Center frequency (MHz) | * D613 | * D614 | |
| White | 10.750 | × | ○ | 10.750 |
| Red | 10.700 | × | × | 10.700 |
| Black | 10.650 | ○ | × | 10.650 |

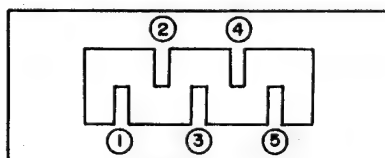
FM intermediate frequency is determined by the three types as shown above, Ceramic filters of same center frequency, i.e., of same color coding should be used for CF1, CF2, and CF3.

When replacing the ceramic filters, perform the FM Discriminator Adjustment.

▲ : AEP, UK Model : CF1, 2
WG, IT Model : CF1, 2, 3

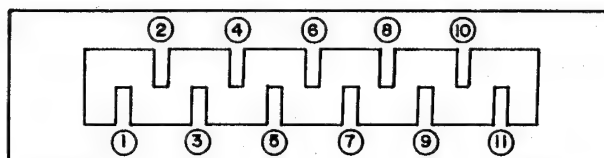
Signal of System Control Connector

CNJ702
SYSTEM CONTROL 1



| | |
|---|----------|
| 1 | L-CH OUT |
| 2 | NC |
| 3 | R-CH OUT |
| 4 | GND |
| 5 | NC |

CNJ701
SYSTEM CONTROL 2



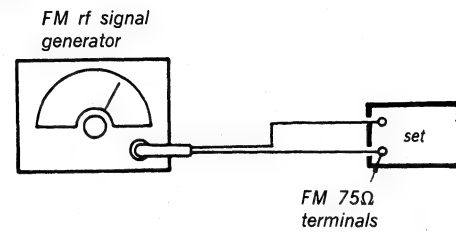
| | | | |
|---|----------|----|----|
| 1 | NC | 7 | VF |
| 2 | NC | 8 | AC |
| 3 | GND | 9 | AC |
| 4 | REMOTE | 10 | NC |
| 5 | VF | 11 | NC |
| 6 | VG(-24V) | | |

SECTION 2 ELECTRICAL ADJUSTMENTS

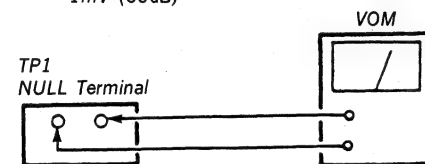
FM SECTION

FM DISCRIMINATOR ADJUSTMENT

Setting:



Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (100%)
Output level : 1mV (60dB)



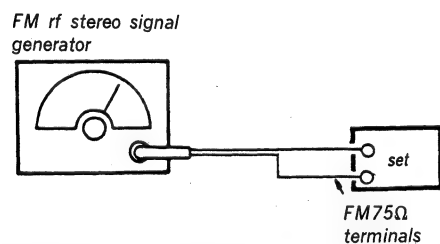
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM tuning level adjustment should be made after FM discriminator alignment.

FM TUNING LEVEL ADJUSTMENT

Setting :



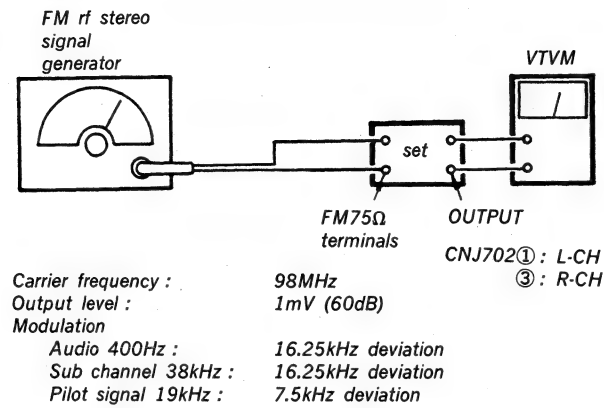
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (100%)
Output level : 17.8μV (25dB)

Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the TUNED LED goes on.

FM STEREO SEPARATION ADJUSTMENT

Procedure :



Carrier frequency : 98MHz
Output level : 1mV (60dB)
Modulation :
Audio 400Hz : 16.25kHz deviation
Sub channel 38kHz : 16.25kHz deviation
Pilot signal 19kHz : 7.5kHz deviation

| FM stereo signal generator output channel | VTVM connection | VTVM reading (dB) |
|---|-----------------|---------------------------------------|
| L-CH | L-CH | Ⓐ |
| R-CH | L-CH | Ⓑ Adjust RV21 for minimum reading. |
| R-CH | R-CH | Ⓒ |
| L-CH | R-CH | Ⓓ Adjust RV21 for minimum reading. |

L-CH Stereo separation : Ⓐ—Ⓑ

R-CH Stereo separation : Ⓒ—Ⓓ

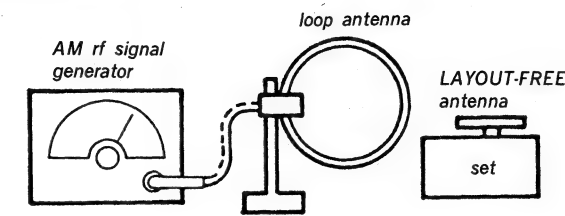
The separations of both channels should be equal.

MW/LW SECTION

AM TUNING LEVEL ADJUSTMENT

BAND select switch : LW

Setting :



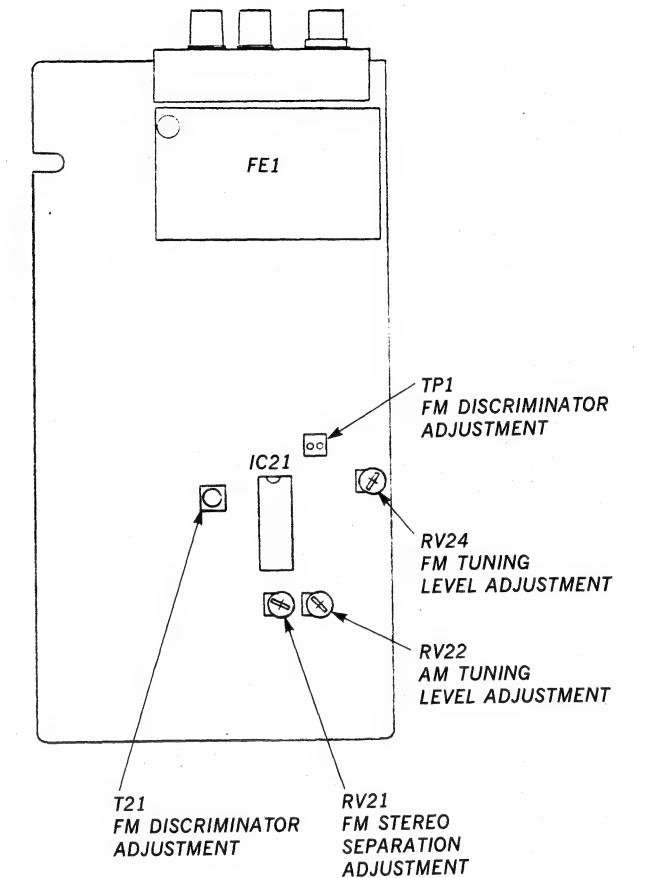
Carrier frequency : 216kHz
Modulation : 400Hz, 30% modulation

Procedure :

1. Set loop antenna so that the LAYOUT-FREE antenna input level becomes 2.5mV/m (68dB).
2. Tune the set to 216kHz.
3. Adjust the RV22 so that the TUNED LED goes on.

Adjustment Location :

—tuner board—



SECTION 3 DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

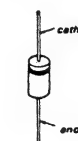
DTC114ES
2SA1317
2SA1348
2SC2669
2SC3330



2SC3113



US1060M
10E2N



2SK246GR3

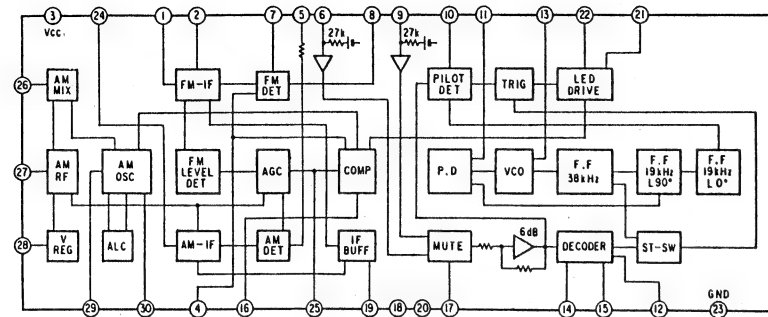


2SC2785

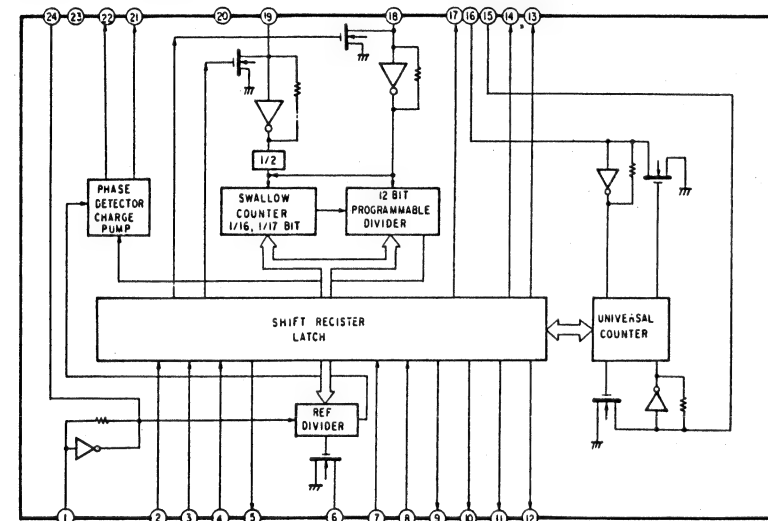


3-2. IC BLOCK DIAGRAMS

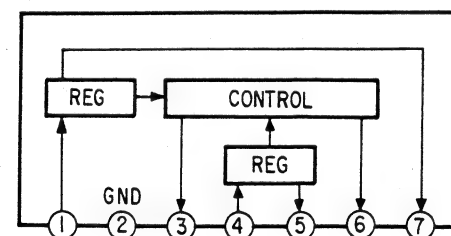
IC21 LA1851N



IC81 LC7218



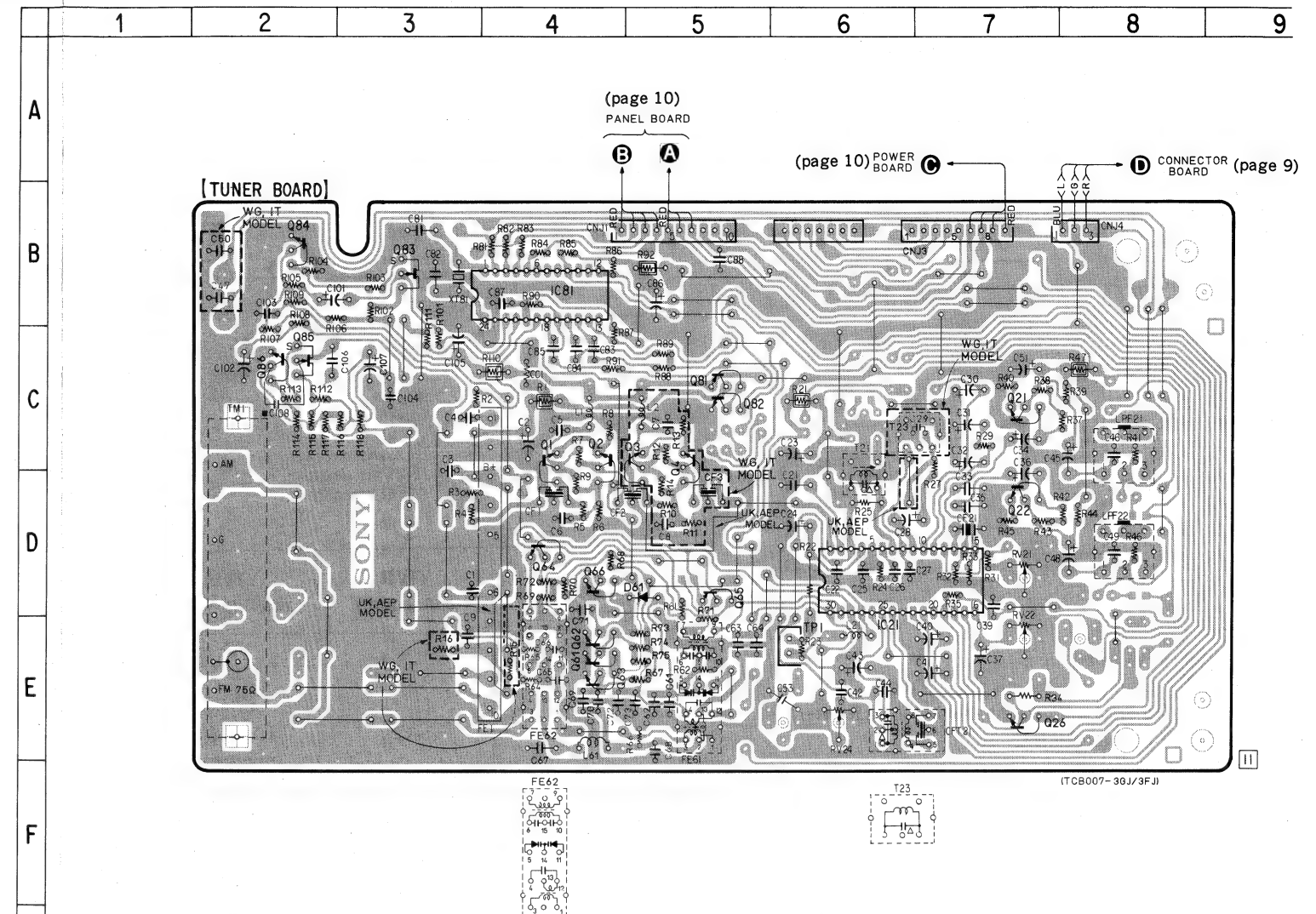
IC701 LA5667



3-3. TUNER SECTION PRINTED WIRING BOARD

• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D61 | D-5 |
| IC21 | D-6 |
| IC81 | B-4 |
| Q1 | C-4 |
| Q2 | C-4 |
| Q3 | C-5 |
| Q4 | C-5 |
| Q21 | C-7 |
| Q22 | D-7 |
| Q26 | E-7 |
| Q61 | E-4 |
| Q62 | E-4 |
| Q63 | E-4 |
| Q64 | D-4 |
| Q65 | D-5 |
| Q66 | D-4 |
| Q81 | C-5 |
| Q82 | C-5 |
| Q83 | B-3 |
| Q84 | B-2 |
| Q85 | C-2 |
| Q86 | C-2 |



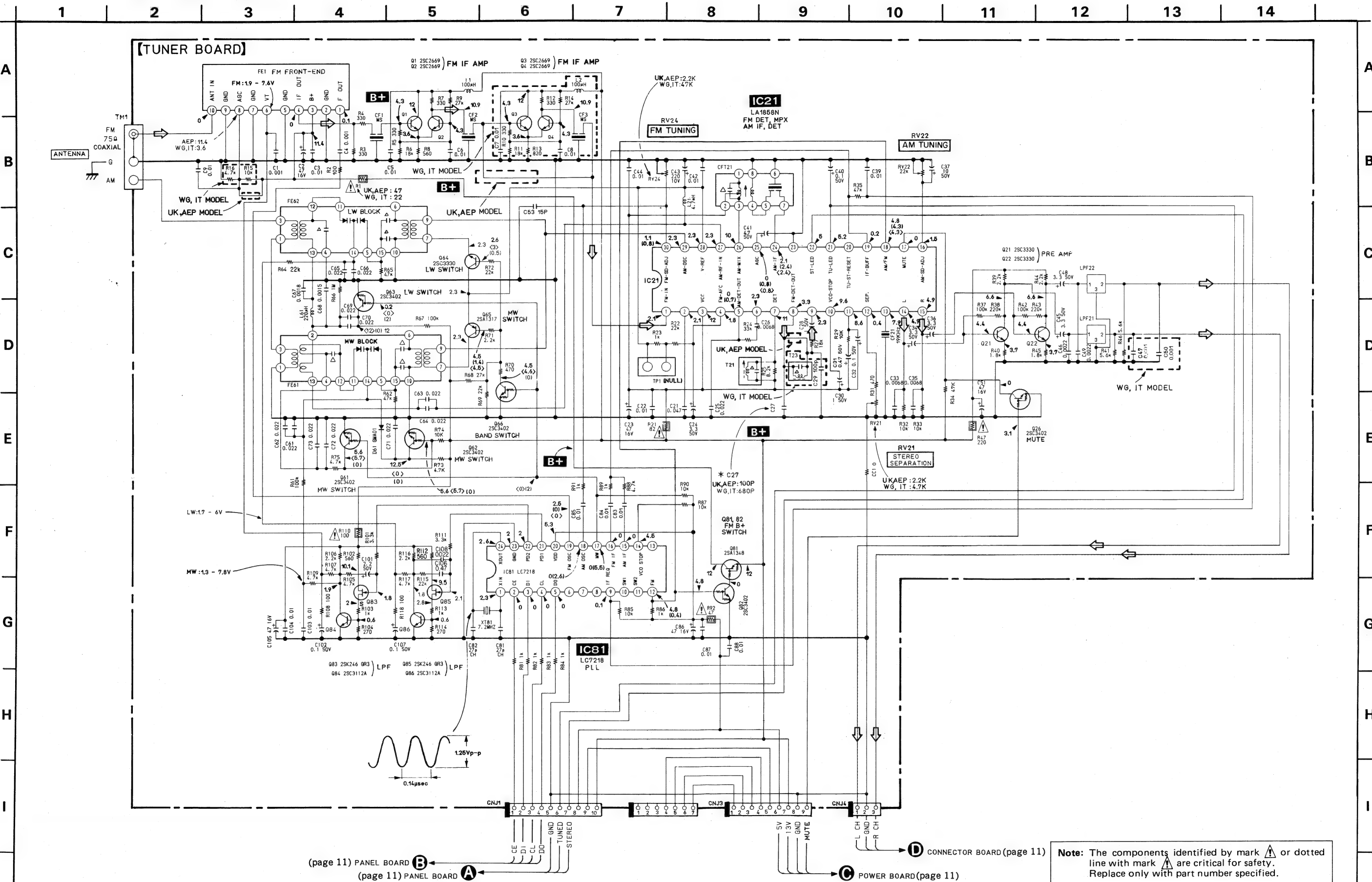
• Note on Printed Wiring Board

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- : indicates side identified with part number.
- WG: West Germany model
- IT: Italian model

• Note on Schematic Diagram

- *D613, *D614: See page 2 for Note on Ceramic Filter (CF1, 2, 3) Replacement.
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- Δ : internal component.
- \square : nonflammable resistor.
- B+: B+ Line
- B-: B- Line
- \square : adjustment for repair.
- Power voltage is supply from TA-818.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- (): AM
- < >: LW
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow : FM
- WG: West Germany model
- IT: Italian model

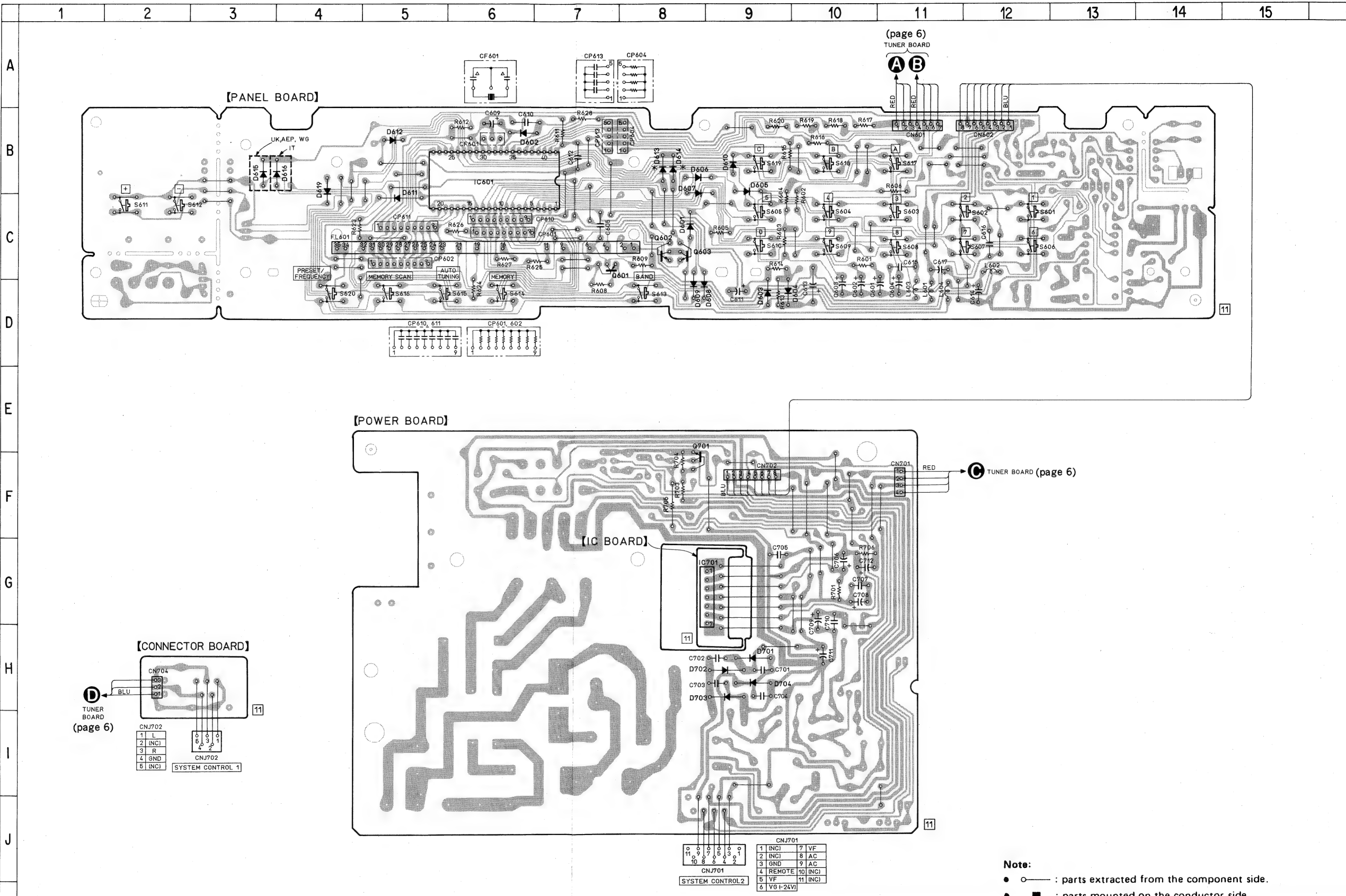
3-4. TUNER SECTION SCHEMATIC DIAGRAM



3-5. CONTROL AND POWER SUPPLY SECTION PRINTED WIRING BOARDS

● Semiconductor Location

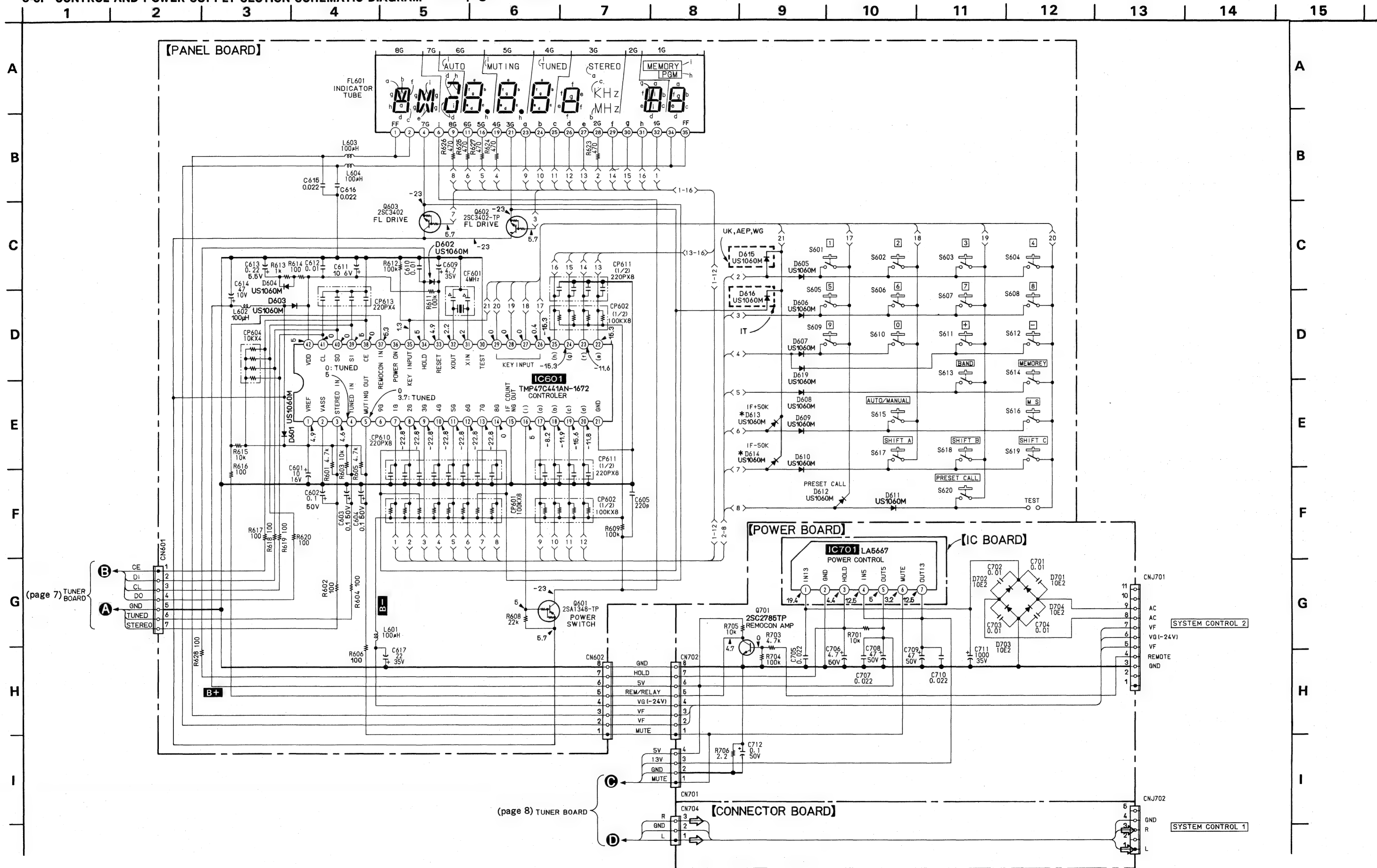
| Ref. No. | Location |
|----------|----------|
| D601 | C-8 |
| D602 | B-6 |
| D603 | D-9 |
| D604 | D-9 |
| D605 | B-9 |
| D606 | B-8 |
| D607 | B-8 |
| D608 | D-8 |
| D609 | D-8 |
| D610 | B-9 |
| D611 | C-5 |
| D612 | B-5 |
| D613 | B-8 |
| D614 | B-8 |
| D615 | B-3 |
| D619 | B-4 |
| D701 | H-9 |
| D702 | H-9 |
| D703 | H-9 |
| D704 | H-9 |
| IC601 | B-6 |
| IC701 | F-9 |
| Q601 | C-7 |
| Q602 | C-8 |
| Q603 | C-8 |
| Q701 | F-8 |



Note:

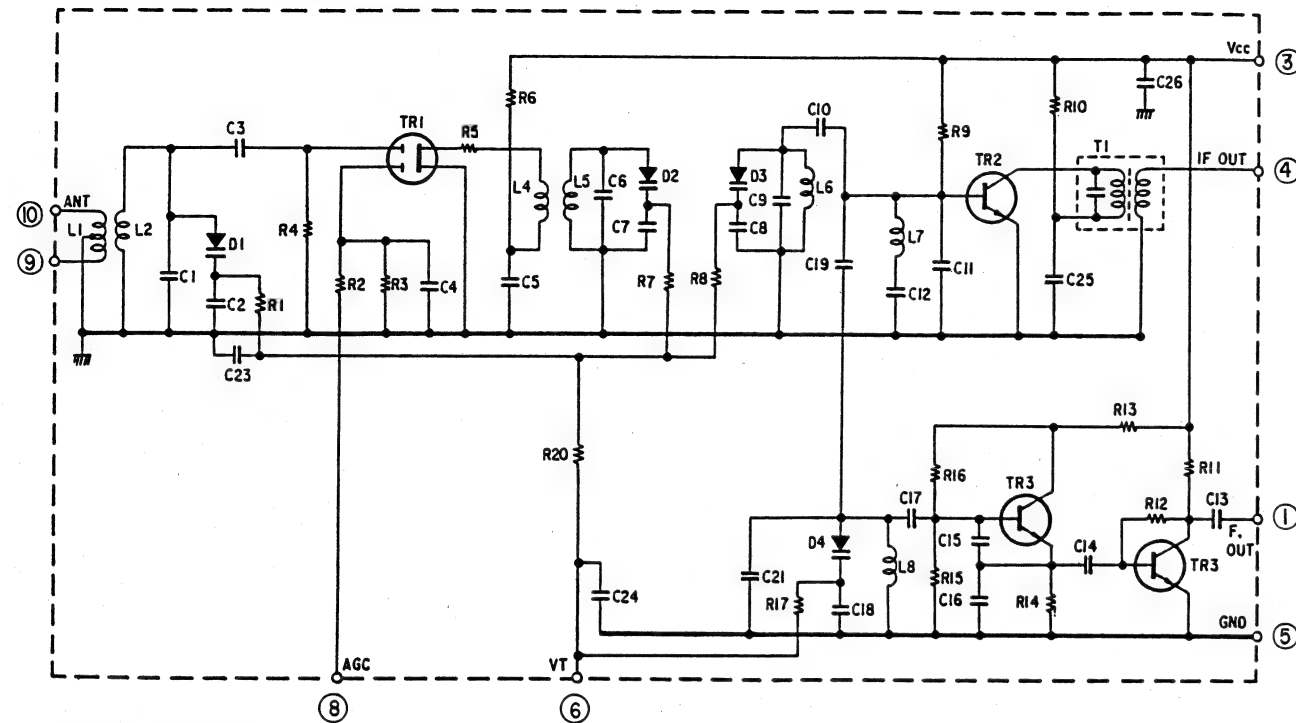
- : parts extracted from the component side.
- : parts mounted on the conductor side.
- : indicates side identified with part number.
- WG: West Germany model
- IT: Italian model

3-6. CONTROL AND POWER SUPPLY SECTION SCHEMATIC DIAGRAM • See page 6 for Notes.

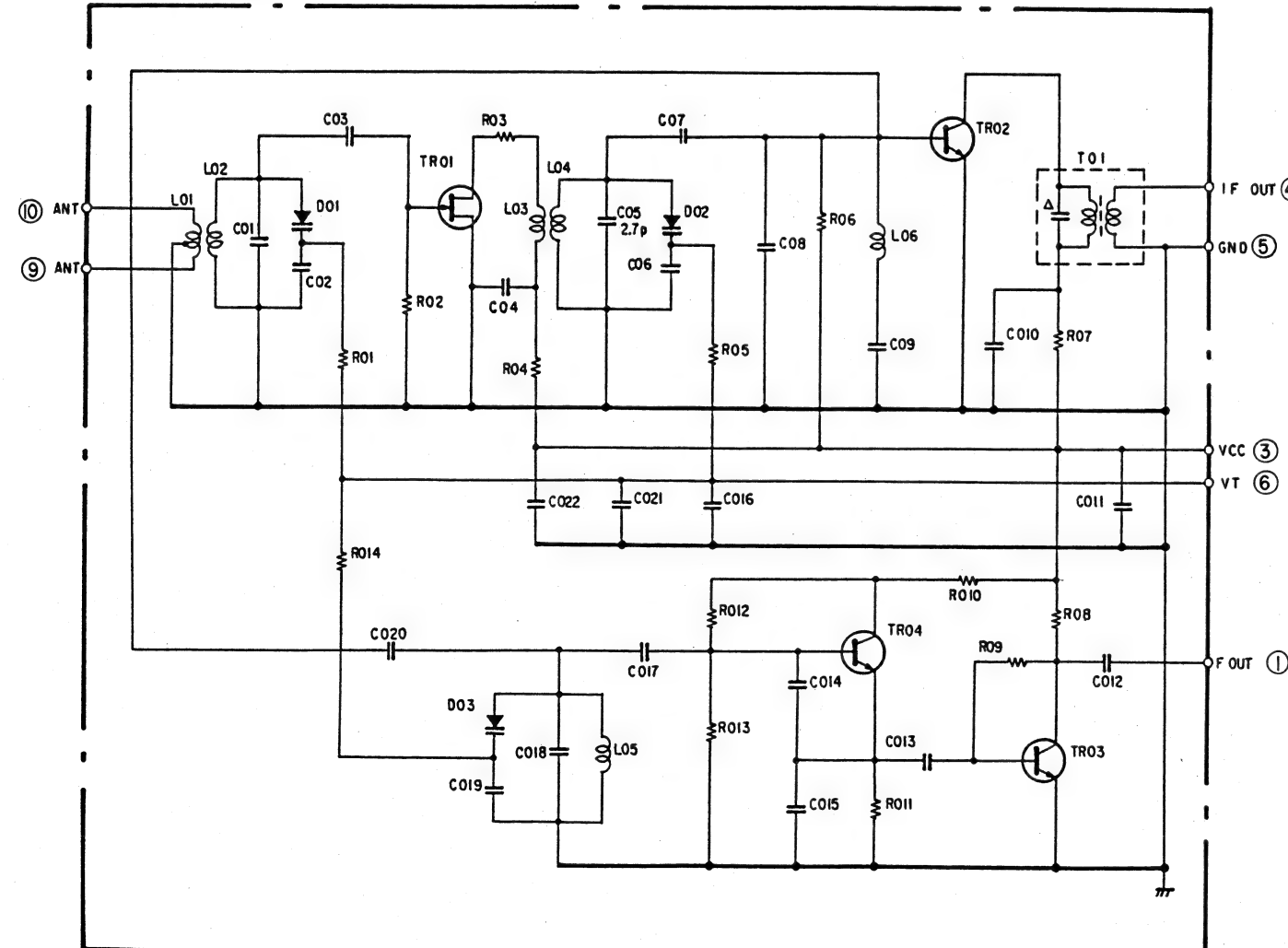


3-7. FM FRONT-END SCHEMATIC DIAGRAMS

FE1 (West Germany, Italian Model)



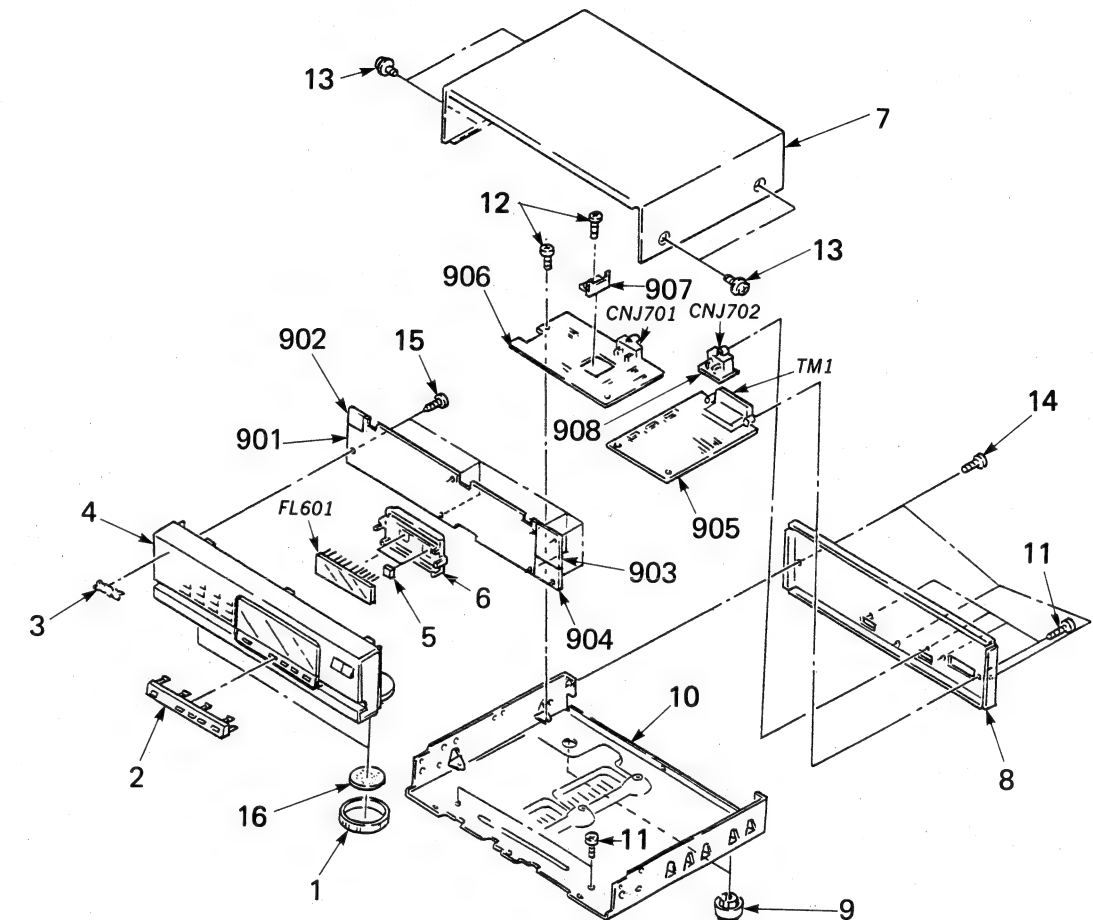
FE1 (AEP, UK Model)

SECTION 4
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color



| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks | |
|-----|---------------|------------------------------|---------|--------|---------------|---|-----------------------------|---------|
| 1 | X-4917-252-1 | PLATE (LEG) ASSY, ORNAMENTAL | 16 | 901 | *A-4333-204-A | (AEP,UK)...MOUNTED PCB, PANEL | 902-904 | |
| 2 | 4-925-176-11 | PLATE, ORNAMENTAL | | | | *A-4333-206-A | (IT).....MOUNTED PCB, PANEL | 902-904 |
| 3 | 4-925-161-21 | EMBLEM (4-A), SONY | | | | *A-4333-211-A | (WG).....MOUNTED PCB, PANEL | 902-904 |
| 4 | X-4917-265-1 | PANEL ASSY (L), FRONT | | | | | | |
| 5 | *4-921-941-21 | CUSHION (FL) | | 902 | *1-631-099-11 | PC BOARD, LED | | |
| 6 | *4-923-103-01 | HOLDER, FL TUBE | | 903 | *1-631-097-11 | PC BOARD, TUNING | | |
| 7 | 4-919-389-12 | CASE | | 904 | *1-631-098-11 | PC BOARD, VR/SW | | |
| 8 | *4-928-479-01 | (AEP,UK,IT)...PANEL, BACK | | 905 | *A-4303-181-A | (AEP,UK)...MOUNTED PCB, TUNER | | |
| | *4-928-479-21 | (WG).....PANEL, BACK | | | *A-4303-182-A | (WG,IT)....MOUNTED PCB, TUNER | | |
| 9 | X-4917-254-1 | FOOT ASSY | | 906 | *1-631-100-11 | PC BOARD, POWER | | |
| 10 | *4-924-520-01 | CHASSIS | | 907 | *1-631-101-11 | PC BOARD, IC | | |
| 11 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | | 908 | *1-631-102-11 | PC BOARD, CONNECTOR | | |
| 12 | 7-682-548-04 | SCREW +BVTT 3X8 (S) | | CNJ701 | *1-566-858-11 | SOCKET, CONNECTOR 11P(SYSTEM CONTROL 2) | | |
| | | | | CNJ702 | *1-566-856-11 | SOCKET, CONNECTOR 5P(SYSTEM CONTROL 1) | | |
| 13 | 3-704-366-01 | SCREW (CASE) (M3X8) | | FL601 | 1-519-512-11 | INDICATOR TUBE, FLUORESCENT | | |
| 14 | 7-682-547-04 | SCREW +BVTT 3X6 (S) | | TM1 | *1-537-138-31 | TERMINAL BOARD (ANT) | | |
| 15 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S | | | | | | |
| 16 | 4-928-401-01 | FELT | | | | | | |

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA....: μ A..., UPA....: μ PA...,UPC....: μ PC, UPD....: μ PD...

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

- WG: West Germany model
- IT : Italian model

| Ref.No. | Part No. | Description | | | |
|---------|---------------|---------------------------------|-----|-----|--|
| 901 | *A-4333-204-A | (AEP,UK)...MOUNTED PCB, PANEL | | | |
| | *A-4333-206-A | (IT).....MOUNTED PCB, PANEL | | | |
| | *A-4333-211-A | (WG)... ..MOUNTED PCB, PANEL | | | |
| 902 | *1-631-099-11 | PC BOARD, LED | | | |
| 903 | *1-631-097-11 | PC BOARD, TUNING | | | |
| 904 | *1-631-098-11 | PC BOARD, VR/SW | | | |
| 905 | *A-4303-181-A | (AEP,UK)...MOUNTED PCB, TUNER | | | |
| | *A-4303-182-A | (WG,IT)....MOUNTED PCB, TUNER | | | |
| 906 | *1-631-100-11 | PC BOARD, POWER | | | |
| 907 | *1-631-101-11 | PC BOARD, IC | | | |
| 908 | *1-631-102-11 | PC BOARD, CONNECTOR | | | |
| C1 | 1-162-294-31 | CERAMIC CHIP 0.001MF | 20% | 25V | |
| C2 | 1-124-477-11 | ELECT 47MF | 20% | 16V | |
| C3 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C4 | 1-162-294-31 | CERAMIC CHIP 0.001MF | 20% | 25V | |
| C5 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C6 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C7 | 1-163-059-00 | (WG,IT)... CERAMIC MELF 0.01MF | 20% | 16V | |
| C8 | 1-163-059-00 | (WG,IT)... CERAMIC MELF 0.01MF | 20% | 16V | |
| C9 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C21 | 1-101-006-00 | CERAMIC 0.047MF | 20% | 50V | |
| C22 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C23 | 1-124-477-11 | ELECT 47MF | 20% | 16V | |
| C24 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V | |
| C25 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C26 | 1-162-527-11 | CERAMIC CHIP 0.0068MF | 20% | 12V | |
| C27 | 1-162-521-11 | (WG,IT)... CERAMIC CHIP 680PF | 20% | 50V | |
| C27 | 1-162-516-11 | (AEP,UK)... CERAMIC CHIP 100PF | 10% | 50V | |
| C28 | 1-124-499-11 | ELECT 1.0MF | 20% | 50V | |
| C29 | 1-162-516-11 | CERAMIC CHIP 100PF | 10% | 50V | |
| C30 | 1-124-499-11 | ELECT 1.0MF | 20% | 50V | |
| C31 | 1-124-902-00 | ELECT 0.47MF | 20% | 50V | |
| C32 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C33 | 1-130-481-00 | PE TEREPHTHALATE 0.0068MF | 5% | 50V | |
| C34 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V | |
| C35 | 1-130-481-00 | PE TEREPHTHALATE 0.0068MF | 5% | 50V | |
| C36 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V | |
| C37 | 1-123-875-11 | ELECT 10MF | 20% | 50V | |
| C39 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 50V | |
| C40 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C41 | 1-124-927-11 | ELECT 4.7MF | 20% | 50V | |
| C42 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C43 | 1-126-176-11 | ELECT 220MF | 20% | 10V | |
| C44 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C45 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V | |
| C46 | 1-162-375-00 | CERAMIC CHIP 0.0022MF | 20% | 25V | |
| C47 | 1-162-294-31 | (WG,IT)... CERAMIC CHIP 0.001MF | 20% | 25V | |
| C48 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V | |
| C49 | 1-162-375-00 | CERAMIC CHIP 0.0022MF | 20% | 25V | |
| C50 | 1-162-294-31 | (WG,IT)... CERAMIC CHIP 0.001MF | 20% | 25V | |
| C51 | 1-124-477-11 | ELECT 47MF | 20% | 16V | |
| C53 | 1-102-951-00 | CERAMIC 15PF | 5% | 50V | |
| C61 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C62 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C63 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C64 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C65 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C66 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C67 | 1-102-120-00 | CERAMIC 0.0018MF | 10% | 50V | |
| C68 | 1-162-523-11 | CERAMIC CHIP 0.0015MF | 20% | 25V | |
| C69 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C70 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C71 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C72 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C73 | 1-163-063-00 | CERAMIC MELF 0.022MF | | 25V | |
| C81 | 1-102-961-00 | CERAMIC 27PF | 5% | 50V | |
| C82 | 1-102-961-00 | CERAMIC 27PF | 5% | 50V | |
| C83 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C84 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C85 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C86 | 1-124-477-11 | ELECT 47MF | 20% | 16V | |
| C87 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C88 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C101 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V | |
| C102 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C103 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C104 | 1-163-059-00 | CERAMIC MELF 0.01MF | 20% | 16V | |
| C105 | 1-124-477-11 | ELECT 47MF | 20% | 16V | |
| C106 | 1-136-173-00 | METALIZED FILM 0.47MF | 5% | 50V | |
| C107 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C108 | 1-101-005-00 | CERAMIC 0.022MF | | 50V | |
| C601 | 1-126-157-11 | ELECT 10MF | 20% | 16V | |
| C602 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C603 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C604 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V | |
| C605 | 1-162-286-31 | CERAMIC 220PF | 10% | 50V | |
| C609 | 1-126-094-11 | ELECT 4.7MF | 20% | 35V | |

| Ref.No. | Part No. | Description |
|---------|---------------|---|
| C610 | 1-161-379-00 | CERAMIC 0.01MF 30% 16V |
| C611 | 1-126-157-11 | ELECT 10MF 20% 16V |
| C612 | 1-161-379-00 | CERAMIC 0.01MF 30% 16V |
| C613 | 1-125-486-11 | DOUBLE LAYERS 0.22F 5.5V |
| C614 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C615 | 1-101-005-00 | CERAMIC 0.022MF 10% 50V |
| C616 | 1-101-005-00 | CERAMIC 0.022MF 10% 50V |
| C617 | 1-123-357-00 | ELECT 22MF 20% 35V |
| C701 | 1-101-004-00 | CERAMIC 0.01MF 50V |
| C702 | 1-101-004-00 | CERAMIC 0.01MF 50V |
| C703 | 1-101-004-00 | CERAMIC 0.01MF 50V |
| C704 | 1-101-004-00 | CERAMIC 0.01MF 50V |
| C705 | 1-101-005-00 | CERAMIC 0.022MF 50V |
| C706 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C707 | 1-101-005-00 | CERAMIC 0.022MF 50V |
| C708 | 1-124-910-11 | ELECT 47MF 20% 50V |
| C709 | 1-124-910-11 | ELECT 47MF 20% 50V |
| C710 | 1-101-005-00 | CERAMIC 0.022MF 50V |
| C711 | 1-126-105-11 | ELECT 1000MF 20% 35V |
| C712 | 1-124-463-00 | ELECT 0.1MF 20% 50V |
| CC1 | 1-249-366-11 | CARBON MELF 0 5% 1/5W |
| CC5 | 1-249-997-11 | CARBON MELF 0 5% 1/8W |
| CC22 | 1-249-366-11 | CARBON MELF 0 5% 1/5W |
| CF1 | 1-567-389-11 | FILTER, CERAMIC |
| CF2 | 1-567-389-11 | FILTER, CERAMIC |
| CF3 | 1-567-389-11 | (WG,IT)...FILTER, CERAMIC |
| CF21 | 1-577-075-11 | OSCILLATOR, CERAMIC (19kHz) |
| CF601 | 1-577-358-21 | VIBRATOR, CERAMIC (4MHz) |
| CFT21 | 1-404-853-11 | TRANSFORMER, IF (CERAMIC FILTER) |
| CN601 | 1-568-282-11 | SOCKET, CONNECTOR 7P |
| CN602 | *1-568-283-11 | SOCKET, CONNECTOR 8P |
| CN701 | *1-568-308-11 | SOCKET, CONNECTOR 4P |
| CN702 | *1-568-312-21 | SOCKET, CONNECTOR 8P |
| CN704 | *1-568-307-21 | SOCKET, CONNECTOR 3P |
| CNJ1 | *1-568-276-11 | SOCKET, CONNECTOR 10P |
| CNJ3 | *1-568-275-11 | SOCKET, CONNECTOR 9P |
| CNJ4 | 1-568-269-11 | SOCKET, CONNECTOR 3P |
| CNJ701 | *1-566-858-11 | SOCKET, CONNECTOR 11P(SYSTEM CONTROL 2) |
| CNJ702 | *1-566-856-11 | SOCKET, CONNECTOR 5P(SYSTEM CONTROL 1) |
| CP601 | 1-233-138-11 | COMPOSITION CIRCUIT BLOCK |
| CP602 | 1-233-138-11 | COMPOSITION CIRCUIT BLOCK |
| CP604 | 1-232-986-11 | COMPOSITION CIRCUIT BLOCK |
| CP610 | 1-233-151-11 | COMPOSITION CIRCUIT BLOCK |
| CP611 | 1-233-151-11 | COMPOSITION CIRCUIT BLOCK |
| CP613 | 1-233-150-11 | COMPOSITION CIRCUIT BLOCK |
| D61 | 8-719-000-26 | DIODE US1060M |
| D601 | 8-719-000-26 | DIODE US1060M |
| D602 | 8-719-000-26 | DIODE US1060M |
| D603 | 8-719-000-26 | DIODE US1060M |
| D604 | 8-719-000-26 | DIODE US1060M |
| D605 | 8-719-000-26 | DIODE US1060M |
| D606 | 8-719-000-26 | DIODE US1060M |
| D607 | 8-719-000-26 | DIODE US1060M |
| D608 | 8-719-000-26 | DIODE US1060M |
| D609 | 8-719-000-26 | DIODE US1060M |
| D610 | 8-719-000-26 | DIODE US1060M |
| D611 | 8-719-000-26 | DIODE US1060M |
| D612 | 8-719-000-26 | DIODE US1060M |

| Ref.No. | Part No. | Description |
|---------|---------------|--------------------------------------|
| D613 | 8-719-000-26 | DIODE US1060M |
| D614 | 8-719-000-26 | DIODE US1060M |
| D615 | 8-719-000-26 | (AEP,UK,WG)...DIODE US1060M |
| D616 | 8-719-000-26 | (IT)...DIODE US1060M |
| D619 | 8-719-000-26 | DIODE US1060M |
| D701 | 8-719-200-77 | DIODE 10E2N |
| D702 | 8-719-200-77 | DIODE 10E2N |
| D703 | 8-719-200-77 | DIODE 10E2N |
| D704 | 8-719-200-77 | DIODE 10E2N |
| FE1 | 1-463-857-11 | FRONT END (FM) |
| FF61 | 1-236-462-11 | ENCAPSULATED COMPONENT (MW RF BLOCK) |
| FE62 | 1-236-463-11 | ENCAPSULATED COMPONENT (LW RF BLOCK) |
| FL601 | 1-519-512-11 | INDICATOR TUBE, FLUORESCENT |
| IC21 | 8-759-821-45 | IC LA1851N |
| IC81 | 8-759-820-91 | IC LC7218 |
| IC601 | 8-759-234-25 | IC TMP47C441AN-1672 |
| IC701 | 8-759-820-09 | IC LA5667 |
| L1 | 1-410-645-31 | MICRO INDUCTOR (100UH) |
| L2 | 1-410-645-31 | (WG,IT)...MICRO INDUCTOR (100UH) |
| L21 | 1-407-500-00 | MICRO INDUCTOR (4.7mH) |
| L61 | 1-410-525-11 | MICRO INDUCTOR (220UH) |
| L601 | 1-408-421-00 | INDUCTOR 100UH |
| L602 | 1-408-421-00 | INDUCTOR 100UH |
| L603 | 1-408-421-00 | INDUCTOR 100UH |
| L604 | 1-408-421-00 | INDUCTOR 100UH |
| LPF21 | 1-235-164-00 | FILTER, LOW PASS |
| LPF22 | 1-235-164-00 | FILTER, LOW PASS |
| Q1 | 8-729-266-93 | TRANSISTOR 2SC2669 |
| Q2 | 8-729-266-93 | TRANSISTOR 2SC2669 |
| Q3 | 8-729-266-93 | (WG,IT)...TRANSISTOR 2SC2669 |
| Q4 | 8-729-266-93 | (WG,IT)...TRANSISTOR 2SC2669 |
| Q21 | 8-729-820-23 | TRANSISTOR 2SC3330S |
| Q22 | 8-729-820-23 | TRANSISTOR 2SC3330S |
| Q26 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q61 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q62 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q63 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q64 | 8-729-820-23 | TRANSISTOR 2SC3330S |
| Q65 | 8-729-820-10 | TRANSISTOR 2SA1317 |
| Q66 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q68 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q81 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q82 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q83 | 8-729-202-67 | TRANSISTOR 2SK246GR3 |
| Q84 | 8-729-203-57 | TRANSISTOR 2SC3113A |
| Q85 | 8-729-202-67 | TRANSISTOR 2SK246GR3 |
| Q86 | 8-729-203-57 | TRANSISTOR 2SC3113A |
| Q601 | 8-729-806-10 | TRANSISTOR 2SA1348 |
| Q602 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q603 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q701 | 8-729-119-78 | TRANSISTOR 2SC2785 |
| R1 | △1-249-397-11 | (WG,IT)...CARBON 22 5% 1/4W F |
| R1 | △1-249-401-11 | (AEP,UK)...CARBON 47 5% 1/4W F |
| R2 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R3 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |
| R4 | 1-249-329-11 | CARBON MELF 330 5% 1/8W |

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | | | |
|---------|----------------|-----------------------|------|----|--------|
| R5 | 1-249-329-11 | CARBON MELF | 330 | 5% | 1/8W |
| R6 | 1-249-350-11 | CARBON MELF | 18K | 5% | 1/8W |
| R7 | 1-249-329-11 | CARBON MELF | 330 | 5% | 1/8W |
| R8 | 1-249-332-11 | CARBON MELF | 560 | 5% | 1/8W |
| R9 | 1-249-352-11 | CARBON MELF | 27K | 5% | 1/8W |
| R10 | 1-249-329-11 | (WG.IT)...CARBON MELF | 330 | 5% | 1/8W |
| R11 | 1-249-350-11 | (WG.IT)...CARBON MELF | 18K | 5% | 1/8W |
| R12 | 1-249-329-11 | (WG.IT)...CARBON MELF | 330 | 5% | 1/8W |
| R13 | 1-249-334-11 | (WG.IT)...CARBON MELF | 820 | 5% | 1/8W |
| R14 | 1-249-352-11 | (WG.IT)...CARBON MELF | 27K | 5% | 1/8W |
| R15 | 1-249-347-11 | (WG.IT)...CARBON MELF | 10K | 5% | 1/8W |
| R16 | 1-249-343-11 | (WG.IT)...CARBON MELF | 4.7K | 5% | 1/8W |
| R21 | △ 1-249-404-00 | CARBON | 82 | 5% | 1/4W F |
| R22 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R23 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R24 | 1-249-353-11 | CARBON MELF | 33K | 5% | 1/8W |
| R25 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R27 | 1-249-350-11 | CARBON MELF | 18K | 5% | 1/8W |
| R29 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R31 | 1-249-331-11 | CARBON MELF | 470 | 5% | 1/8W |
| R32 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R33 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R34 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R35 | 1-249-355-11 | CARBON MELF | 47K | 5% | 1/8W |
| R37 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W |
| R38 | 1-249-363-11 | CARBON MELF | 220K | 5% | 1/8W |
| R39 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W |
| R40 | 1-249-338-11 | CARBON MELF | 1.8K | 5% | 1/8W |
| R41 | 1-249-344-11 | CARBON MELF | 5.6K | 5% | 1/8W |
| R42 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W |
| R43 | 1-249-363-11 | CARBON MELF | 220K | 5% | 1/8W |
| R44 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W |
| R45 | 1-249-338-11 | CARBON MELF | 1.8K | 5% | 1/8W |
| R46 | 1-249-344-11 | CARBON MELF | 5.6K | 5% | 1/8W |
| R47 | △ 1-249-409-11 | CARBON | 220 | 5% | 1/4W F |
| R61 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W |
| R62 | 1-249-355-11 | CARBON MELF | 47K | 5% | 1/8W |
| R64 | 1-249-351-11 | CARBON MELF | 22K | 5% | 1/8W |
| R65 | 1-249-355-11 | CARBON MELF | 47K | 5% | 1/8W |
| R66 | 1-215-493-00 | CARBON MELF | 1M | 5% | 1/5W |
| R67 | 1-249-359-11 | CARBON MELF | 100K | 5% | 1/8W |
| R68 | 1-249-352-11 | CARBON MELF | 27K | 5% | 1/8W |
| R69 | 1-249-351-11 | CARBON MELF | 22K | 5% | 1/8W |
| R70 | 1-249-331-11 | CARBON MELF | 470 | 5% | 1/8W |
| R71 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W |
| R72 | 1-249-351-11 | CARBON MELF | 22K | 5% | 1/8W |
| R73 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R74 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R75 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R81 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R82 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R83 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R84 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R85 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R86 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R87 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R88 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |

| Ref.No. | Part No. | Description | | | |
|---------|----------------|--|------|----|--------|
| R89 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R90 | 1-249-347-11 | CARBON MELF | 10K | 5% | 1/8W |
| R91 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R92 | △ 1-249-401-11 | CARBON | 47 | 5% | 1/4W F |
| R101 | 1-249-341-11 | CARBON MELF | 3.3K | 5% | 1/8W |
| R102 | 1-249-332-11 | CARBON MELF | 560 | 5% | 1/8W |
| R103 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R104 | 1-249-328-11 | CARBON MELF | 270 | 5% | 1/8W |
| R105 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R106 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W |
| R107 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R108 | 1-249-323-11 | CARBON MELF | 100 | 5% | 1/8W |
| R109 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R111 | 1-249-341-11 | CARBON MELF | 3.3K | 5% | 1/8W |
| R112 | 1-249-332-11 | CARBON MELF | 560 | 5% | 1/8W |
| R113 | 1-249-335-11 | CARBON MELF | 1K | 5% | 1/8W |
| R114 | 1-249-328-11 | CARBON MELF | 270 | 5% | 1/8W |
| R115 | 1-249-351-11 | CARBON MELF | 22K | 5% | 1/8W |
| R116 | 1-249-339-11 | CARBON MELF | 2.2K | 5% | 1/8W |
| R117 | 1-249-343-11 | CARBON MELF | 4.7K | 5% | 1/8W |
| R118 | 1-249-323-11 | CARBON MELF | 100 | 5% | 1/8W |
| R601 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R602 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R603 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R604 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R605 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R606 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R608 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R609 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R611 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R612 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R613 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R614 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R615 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R616 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R617 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R618 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R619 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R620 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R623 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R624 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R625 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R626 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R627 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R628 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R701 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R703 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R704 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R705 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R706 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W |
| RV21 | 1-238-013-11 | (AEP.UK)...RES. ADJ. CARBON 2.2K (STEREO SEPARATION) | | | |
| RV21 | 1-238-015-11 | (WG.IT)...RES. ADJ. CARBON 4.7K (STEREO SEPARATION) | | | |
| RV22 | 1-238-017-11 | RES. ADJ. CARBON 22K (AM TUNING) | | | |

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

| <u>Ref.No.</u> | <u>Part No.</u> | <u>Description</u> |
|----------------|-----------------|---|
| RV24 | 1-238-013-11 | (AEP,UK)...RES, ADJ, CARBON 2.2K (FM TUNING) |
| RV24 | 1-238-019-11 | (WG,IT)...RES, ADJ, CARBON 47K (FM TUNING) |
| S601 | 1-554-303-21 | SWITCH, KEY BOARD (1) |
| S602 | 1-554-303-21 | SWITCH, KEY BOARD (2) |
| S603 | 1-554-303-21 | SWITCH, KEY BOARD (3) |
| S604 | 1-554-303-21 | SWITCH, KEY BOARD (4) |
| S605 | 1-554-303-21 | SWITCH, KEY BOARD (5) |
| S606 | 1-554-303-21 | SWITCH, KEY BOARD (6) |
| S607 | 1-554-303-21 | SWITCH, KEY BOARD (7) |
| S608 | 1-554-303-21 | SWITCH, KEY BOARD (8) |
| S609 | 1-554-303-21 | SWITCH, KEY BOARD (9) |
| S610 | 1-554-303-21 | SWITCH, KEY BOARD (0) |
| S611 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING +) |
| S612 | 1-554-303-21 | SWITCH, KEY BOARD (TUNING -) |
| S613 | 1-554-303-21 | SWITCH, KEY BOARD (BAND) |
| S614 | 1-554-303-21 | SWITCH, KEY BOARD (MEMORY) |
| S615 | 1-554-303-21 | SWITCH, KEY BOARD (AUTO TUNING) |
| S616 | 1-554-303-21 | SWITCH, KEY BOARD (MEMORY SCAN) |
| S617 | 1-554-303-21 | SWITCH, KEY BOARD (SHIFT A) |
| S618 | 1-554-303-21 | SWITCH, KEY BOARD (SHIFT B) |
| S619 | 1-554-303-21 | SWITCH, KEY BOARD (SHIFT C) |
| S620 | 1-554-303-21 | SWITCH, KEY BOARD (PRESET/FREQUENCY) |
| T21 | 1-404-807-11 | TRANSFORMER, DISCRIMINATOR |
| T23 | 1-236-465-11 | (WG,IT)...ENCAPSULATED COMPONENT |
| TM1 | *1-537-138-31 | TERMINAL BOARD (ANT) |
| TP1 | *1-560-060-00 | PIN, CONNECTOR 2P |
| XT81 | 1-577-126-11 | VIBRATOR, CRYSTAL (7.2MHz) |

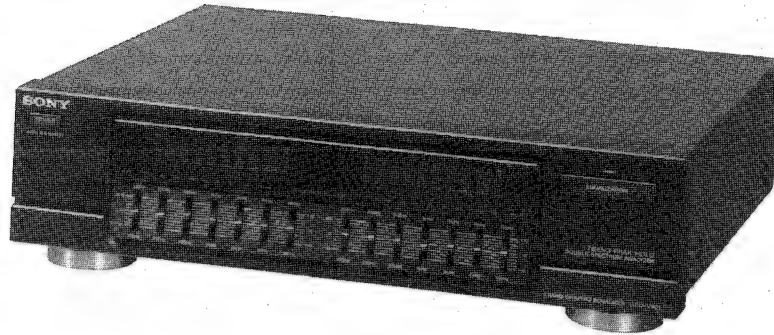
SEQ-V901

SERVICE MANUAL

AEP Model

UK Model

E Model



SPECIFICATIONS

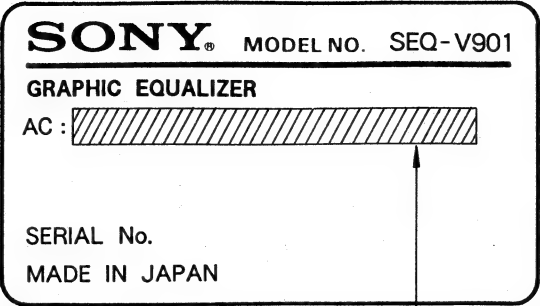
| | | | |
|---|--|---------------------------|--|
| Input | LINE IN: Phono jacks, 245 mV (-10 dB), 50 kohms | Power requirements | AEP, West Germany, model : 220 V AC 50/60 Hz |
| Output | LINE OUT: Phono jacks, 245 mV (-10 dB), Load impedance: more than 10 kohms | UK model: 240 V AC, 50 Hz | E model : 110 - 120 or 220 - 240 V AC, adjustable, 50/60 Hz |
| Graphic equalizer | Boost/cut range: ± 10 dB Center frequencies: 100 Hz, 250 Hz, 500 Hz, 1 kHz, 3 kHz, 6 kHz, 14 kHz | Power consumption | 8 W |
| Frequency response (with EQUALIZATION OFF) | LINE IN: 20 Hz to 50 kHz ± 1.5 dB | AC outlet | 100 W, unswitched |
| Harmonic distortion | LINE IN: Less than 0.01% (at 1 kHz, 1 V output) | Dimensions | Approx. 355 \times 95 \times 310 mm (w/h/d) (14 \times 3 $\frac{3}{4}$ \times 12 $\frac{3}{16}$ inches) |
| Signal-to-noise ratio (with EQUALIZATION OFF) | LINE IN: Better than 100 dB (A network, 1 V output) | Weight | Approx. 2.8 kg (6 lb 3 oz) |
| | | Accessories supplied | Connecting cords (2) |

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

GRAPHIC EQUALIZER
SONY®

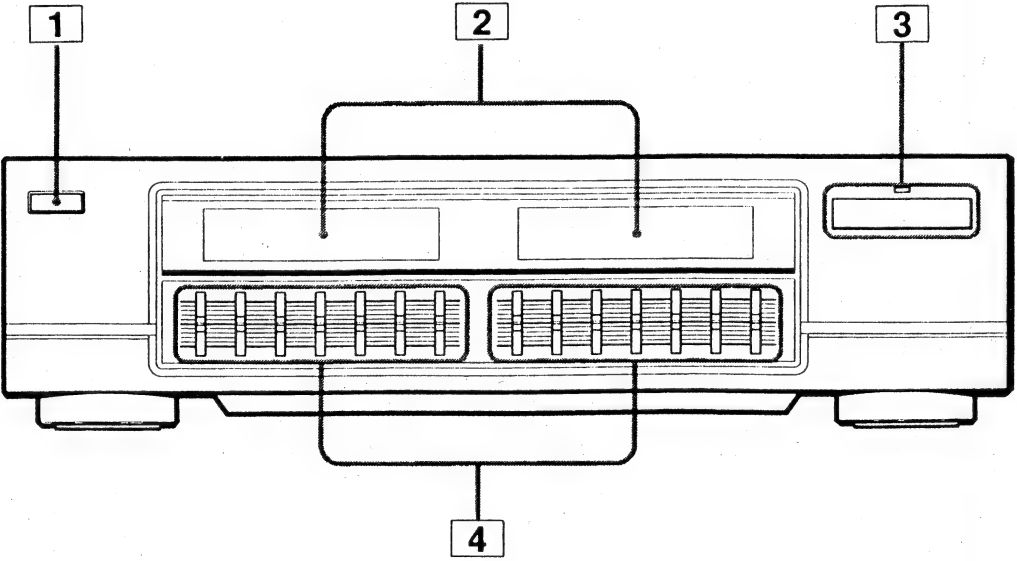
MODEL IDENTIFICATION



AEP, West Germany model : 220V 50/60Hz 8W
UK model : 240V 50Hz 8W
E, Saudi Arabia model : 110-120V/220-240V 50/60Hz 8W

SECTION 1
GENERAL

FUNCTION OF CONTROLS

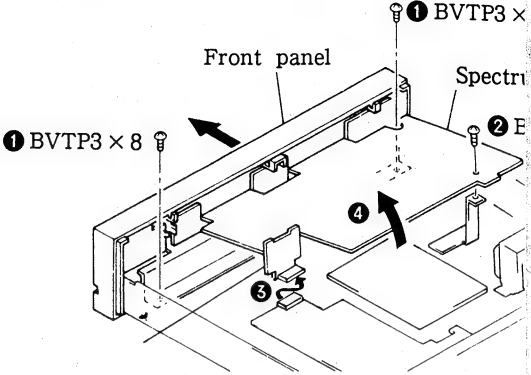


- 1 POWER switch
- 2 Spectrum analyzer
- 3 EQUALIZATION switch and indicator
- 4 Graphic equalizer controls

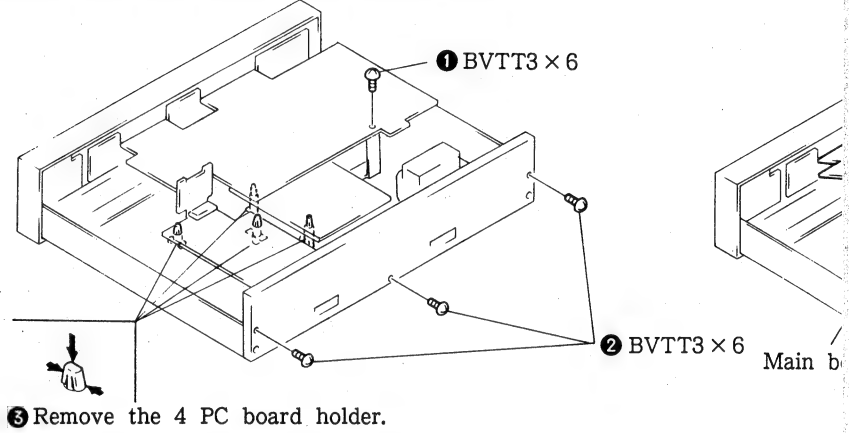
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

FRONT PANEL

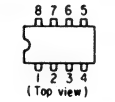


MAIN, SPECTRUM ANALYZER, POWER BOARD

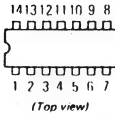


• Semiconductor Lead Layouts

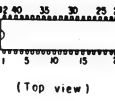
CXA4559P
M5218P



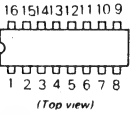
LC4066BH



LC7566



μ PD4027BC

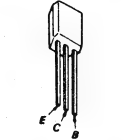


DTA124ES

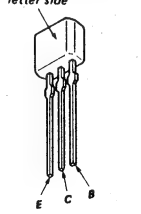
2SC3330

2SC3400

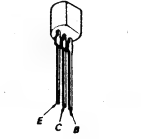
2SC3402



2SA1175HFE
2SC2785HFE



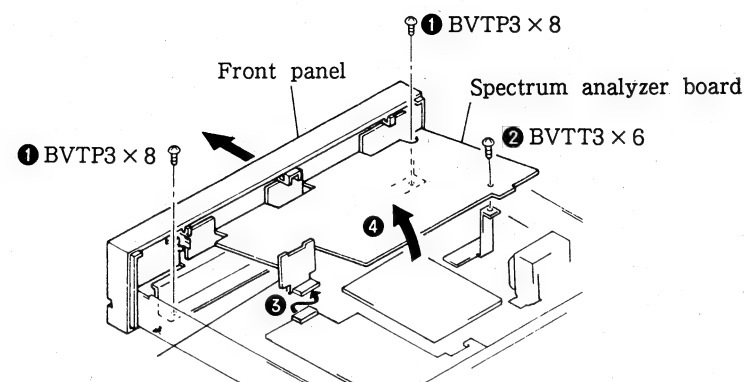
2SB1014
2SC3622ALK



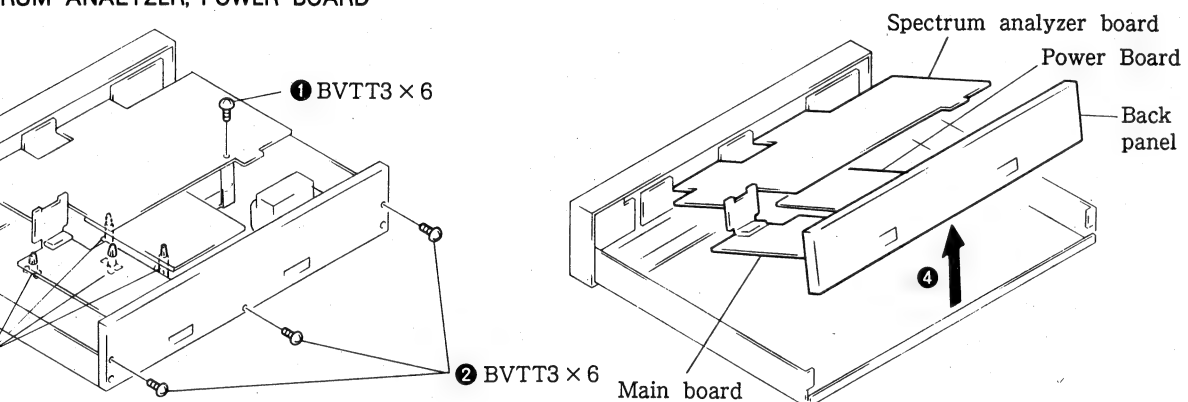
SECTION 2 DISASSEMBLY

Follow the disassembly procedure in the numerical order given.

EL



SPECTRUM ANALYZER, POWER BOARD



Remove the 4 PC board holder.

Resistor Lead Layouts

59P

5
4
1

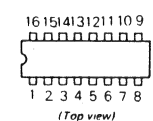
BH

9 8
6 7
1

66

25 22
15 21
1

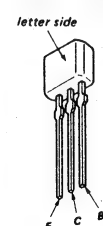
μ PD4027BC



DTA124ES
2SC3330
2SC3400
2SC3402



2SA1175HFE
2SC2785HFE



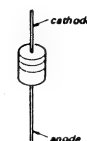
2SB1014
2SC3622ALK



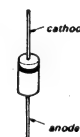
2SB1187F
2SD1761E



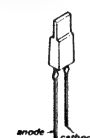
HZS6C3L
UZL6H2
UZL11C2L



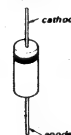
US1060M



SEL9107-G-D



10E2N



SECTION 3 DIAGRAMS

3-1. PRINTED WIRING BOARDS

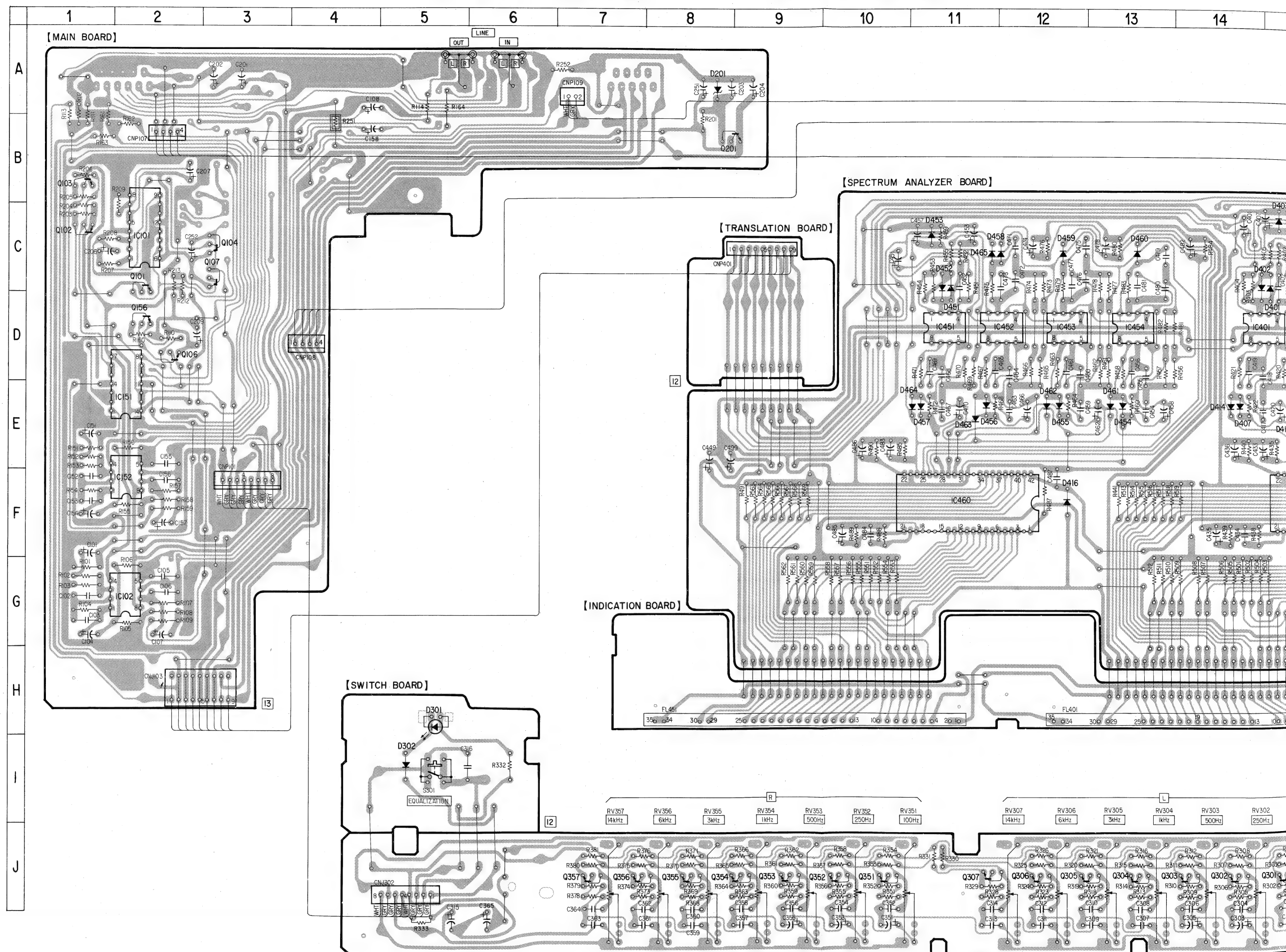
• See page 3 for Semiconductor Lead Layouts.

• Semiconductor Location

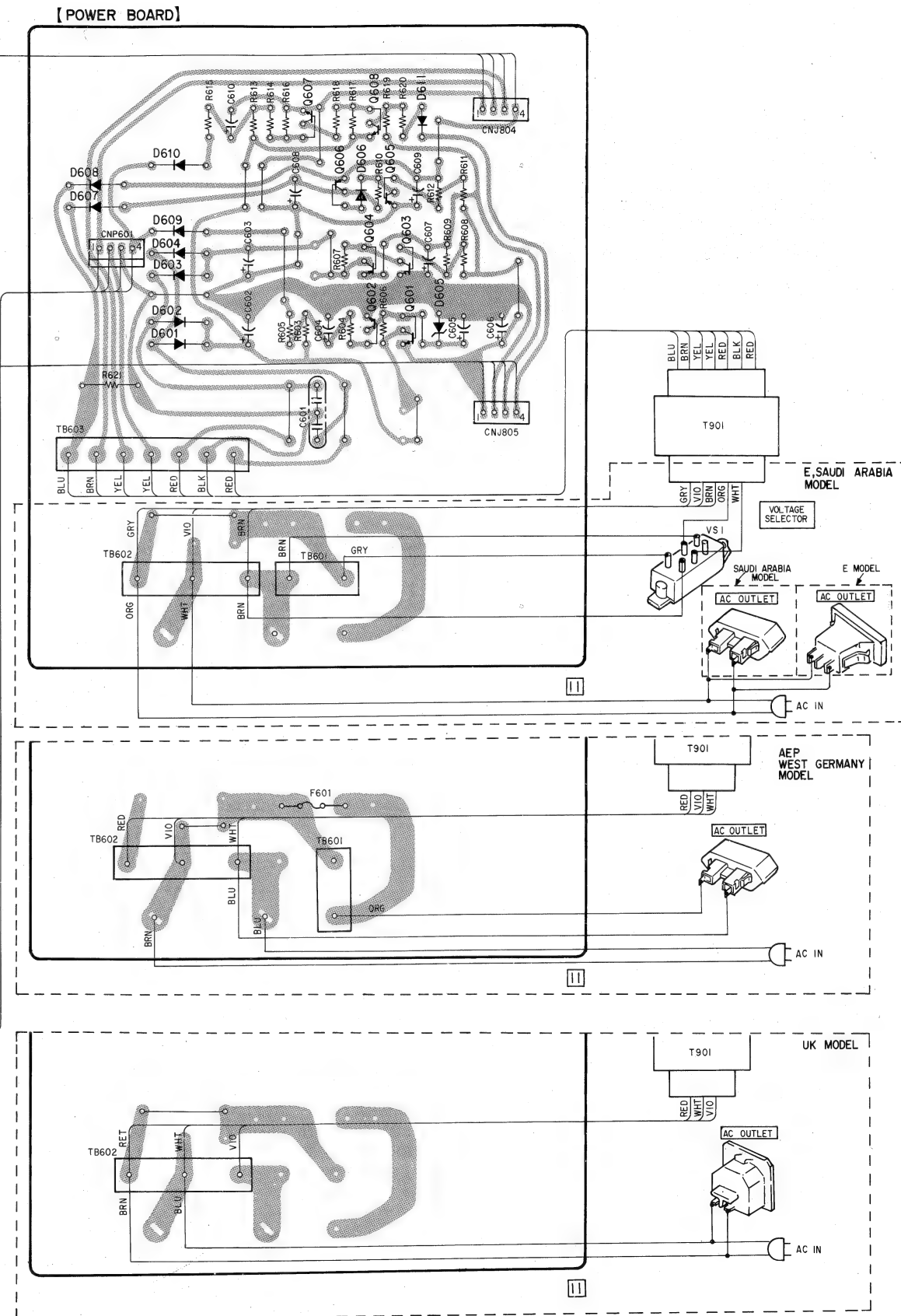
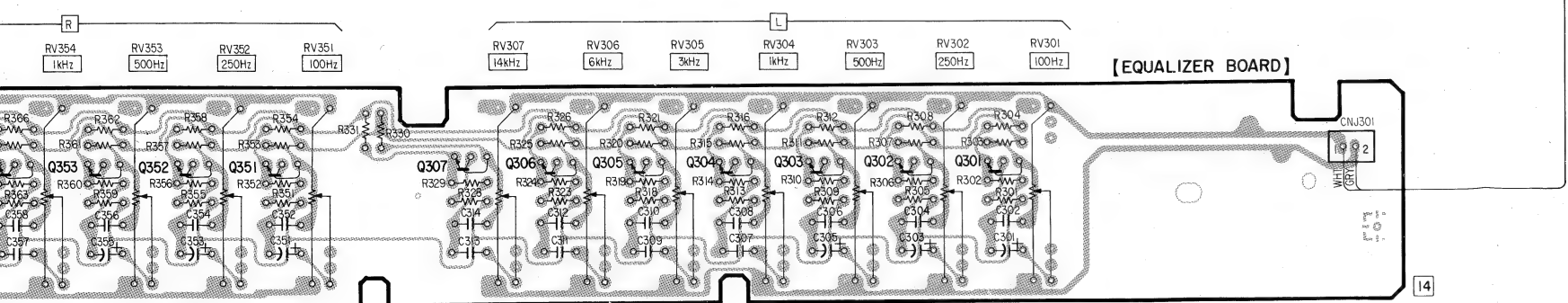
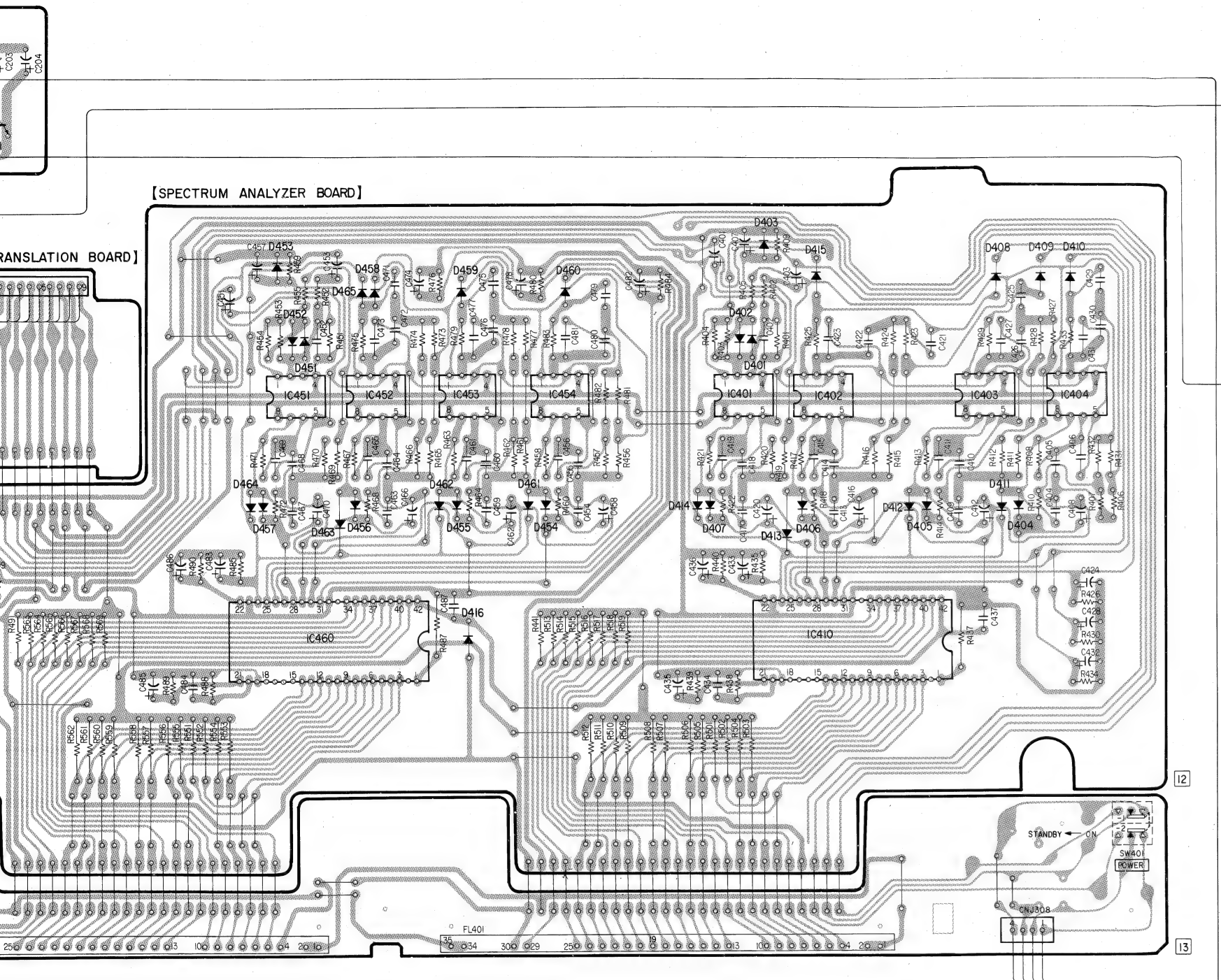
| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D201 | A-8 | IC101 | C-2 |
| D301 | H-5 | IC102 | G-2 |
| D302 | H-5 | IC151 | E-2 |
| D401 | C-15 | IC152 | F-2 |
| D402 | C-14 | IC401 | D-15 |
| D403 | C-15 | IC402 | D-15 |
| D404 | E-17 | IC403 | D-17 |
| D405 | E-16 | IC404 | D-17 |
| D406 | E-15 | IC410 | F-15 |
| D407 | E-14 | IC451 | D-11 |
| D408 | C-17 | IC452 | D-11 |
| D409 | C-17 | IC453 | D-12 |
| D410 | C-17 | IC454 | D-13 |
| D411 | E-17 | IC460 | F-11 |
| D412 | E-16 | | |
| D413 | E-15 | Q101 | C-2 |
| D414 | E-14 | Q102 | C-1 |
| D415 | C-15 | Q103 | B-1 |
| D416 | F-12 | Q104 | C-3 |
| D451 | C-11 | Q106 | D-2 |
| D452 | C-11 | Q107 | C-3 |
| D453 | C-11 | Q156 | D-2 |
| D454 | E-13 | Q201 | B-8 |
| D455 | E-12 | Q301 | J-15 |
| D456 | E-11 | Q302 | J-14 |
| D457 | E-11 | Q303 | J-14 |
| D458 | C-11 | Q304 | J-13 |
| D459 | C-12 | Q305 | J-12 |
| D460 | C-13 | Q306 | J-12 |
| D461 | E-13 | Q307 | J-11 |
| D462 | E-12 | Q351 | J-10 |
| D463 | E-11 | Q352 | J-10 |
| D464 | E-11 | Q353 | J-9 |
| D465 | C-11 | Q354 | J-9 |
| D601 | D-20 | Q355 | J-8 |
| D602 | D-20 | Q356 | J-7 |
| D603 | C-20 | Q357 | J-7 |
| D604 | C-20 | Q601 | D-21 |
| D605 | D-22 | Q602 | D-21 |
| D606 | C-21 | Q603 | C-21 |
| D607 | C-19 | Q604 | C-21 |
| D608 | C-19 | Q605 | C-21 |
| D609 | C-20 | Q606 | C-21 |
| D610 | B-20 | Q607 | B-21 |
| D611 | B-22 | Q608 | B-21 |

Note on Printed Wiring Boards:

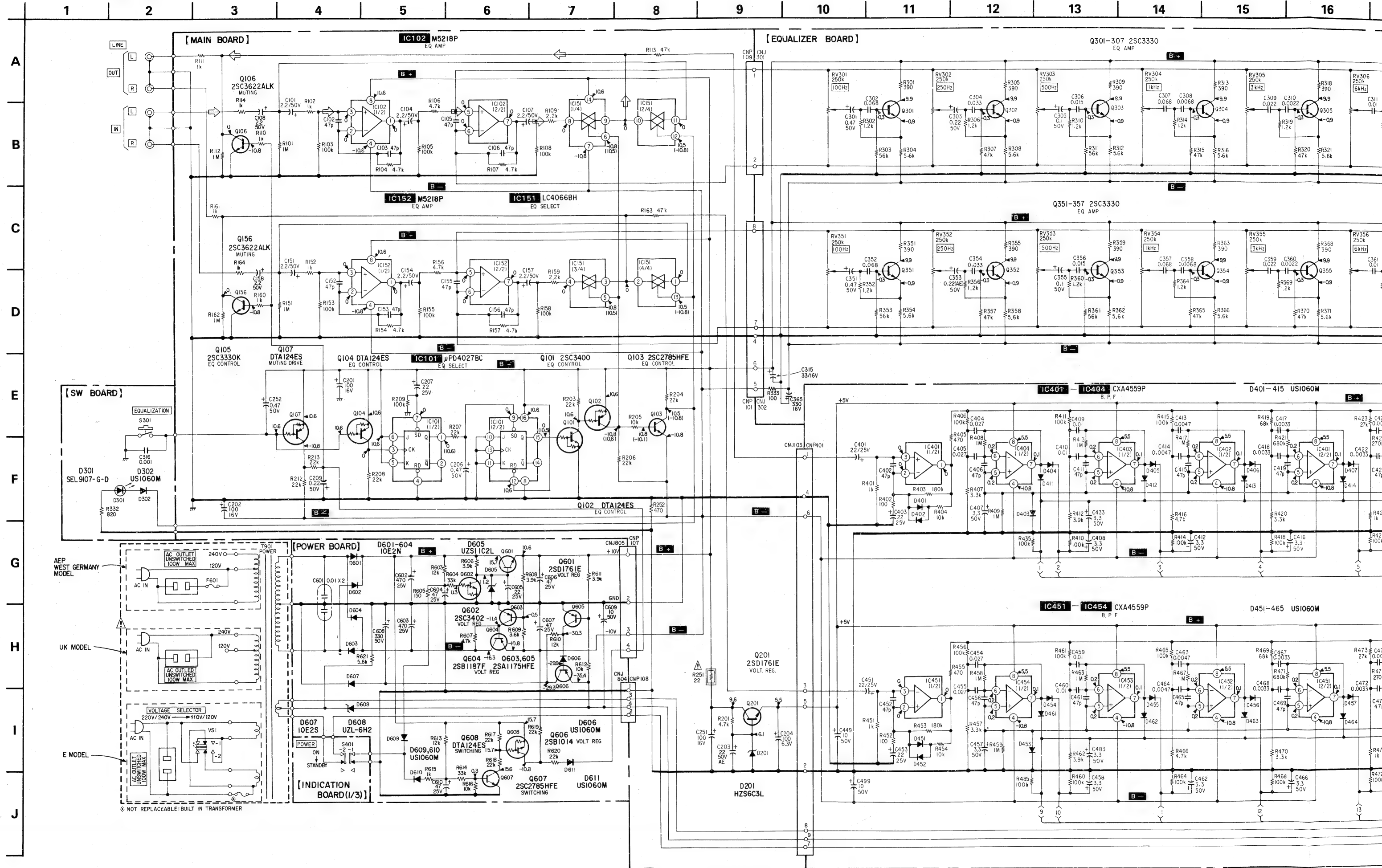
• ○ : parts extracted from the component side.






| | | | | | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|




3-2. SCHEMATIC DIAGRAM



- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
-  : nonflammable resistor.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

- **B +** : B + Line
- **B -** : B - Line
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : EQUALIZATION OFF
() : EQUALIZATION ON
- Voltages are taken with a VOM (input impedance 10M Ω).
Voltage variations may be noted due to normal production tolerances.
-  : signal path





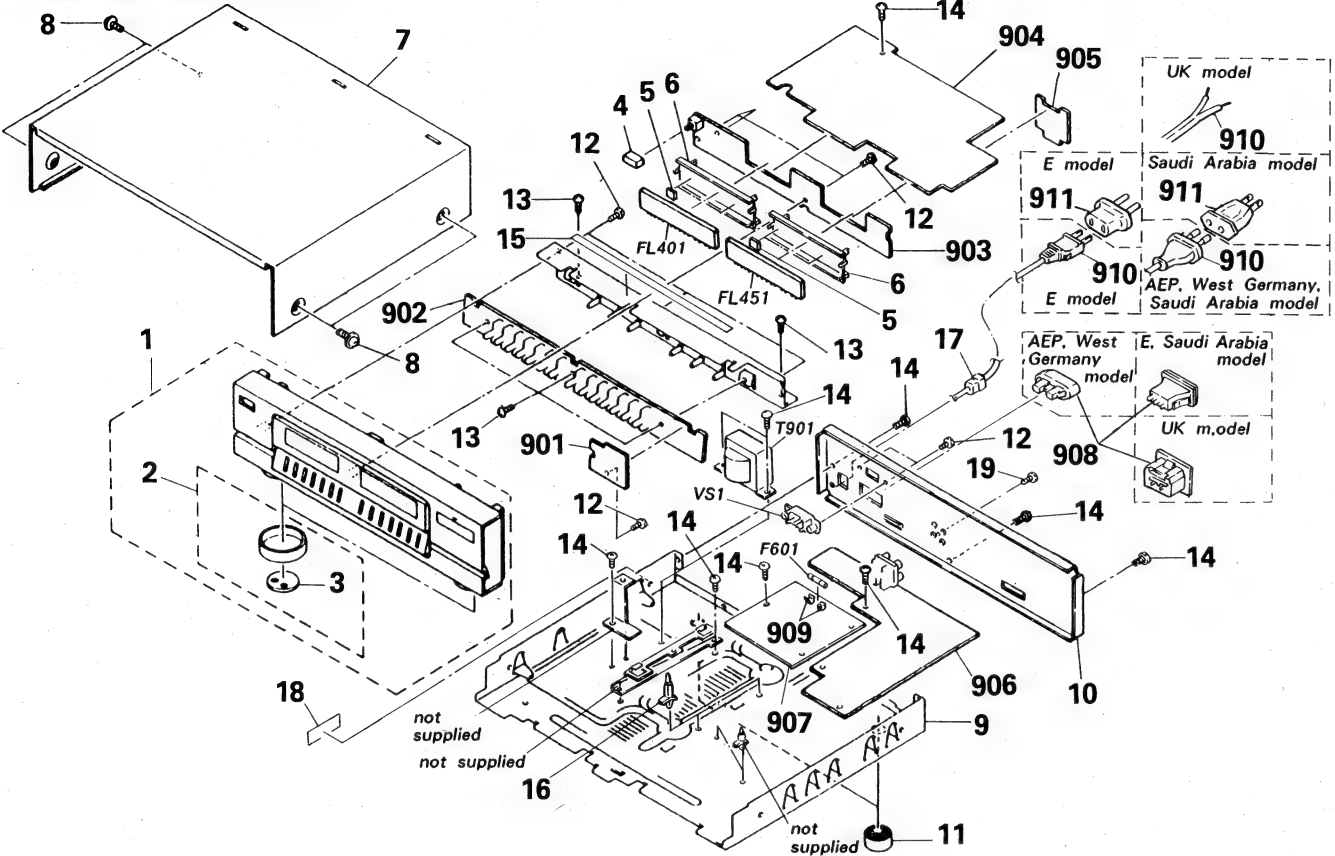
SECTION 4
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-----|---------------|---|---------|-------|---------------|---|---------|
| 1 | X-4917-264-1 | PANEL ASSY, FRONT | 2, 3 | 19 | 7-621-849-00 | SCREW, TAPPING | |
| 2 | X-4917-252-1 | PLATE (LEG) ASSY, ORNAMENTAL | 3 | 901 | *1-628-748-11 | PC BOARD, SWITCH | |
| 3 | 4-928-401-01 | FELT | | 902 | *1-628-745-11 | PC BOARD, EQUALIZER | |
| 4 | 4-925-162-11 | BUTTON (D) | | 903 | *1-628-747-11 | PC BOARD, INDICATION | |
| 5 | *4-921-941-01 | CUSHION (FL) | | 904 | *A-4380-087-A | MOUNTED PCB, SPECTRUM ANALYZER | |
| 6 | *4-923-103-01 | HOLDER, FL TUBE | | 905 | *1-628-749-11 | PC BOARD, TRANSLATION | |
| 7 | 4-919-376-02 | CASE | | 906 | *1-628-744-11 | PC BOARD, MAIN | |
| 8 | 3-704-366-01 | SCREW (CASE) (M3X8) | | 907 | *1-631-082-11 | PC BOARD, POWER | |
| 9 | *4-924-520-01 | CHASSIS | | 908 | △1-526-751-00 | (UK).....OUTLET, AC | |
| 10 | *4-925-160-22 | (AEP).....PANEL, BACK | | | △1-526-882-00 | (E,Saudi Arabia).....OUTLET, AC | |
| | *4-925-160-32 | (UK).....PANEL, BACK | | | △1-526-794-11 | (AEP,West Germany).....OUTLET, AC | |
| | *4-925-160-42 | (E).....PANEL, BACK | | 909 | 1-533-213-31 | (AEP,West Germany)....HOLDER FUSE | |
| | *4-925-160-52 | (Saudi Arabia)....PANEL, BACK | | 910 | △1-551-188-XX | (E).....CORD, POWER | |
| | *4-925-160-61 | (West Germany)....PANEL, BACK | | | △1-555-750-00 | (AEP,West Germany,Saudi Arabia).....CORD, POWER | |
| 11 | X-4917-254-1 | FOOT ASSY | | | △1-556-562-11 | (UK).....CORD, POWER | |
| 12 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S | | 911 | △1-506-401-00 | (Saudi Arabia)....ADAPTOR, CONVERSION | |
| 13 | 7-685-646-79 | SCREW +BVT 3X8 TYPE2 N-S | | | △1-526-565-00 | (E).....AC PLUG ADAPTOR | |
| 14 | 7-682-547-04 | SCREW +BTT 3X6 (S) | | F601 | △1-532-078-00 | (AEP,West Germany)....FUSE, TIME LAG (1A) | |
| 15 | *4-928-474-01 | SHEET, INSULATING | | FL401 | 1-519-494-11 | INDICATOR TUBE, FLUORESCENT | |
| 16 | *4-924-098-31 | HOLDER, PC BOARD | | FL451 | 1-519-494-11 | INDICATOR TUBE, FLUORESCENT | |
| 17 | 3-703-571-11 | (E,Saudi Arabia).....BUSHING (S) (4516), CORD | | T901 | △1-449-721-11 | (AEP,UK,West Germany)....TRANSFORMER, POWER | |
| | 3-703-244-00 | (AEP,UK,West Germany)....BUSHING (2104), CORD | | | △1-449-722-11 | (E,Saudi Arabia)....TRANSFORMER, POWER | |
| 18 | *3-703-079-21 | (UK)....LABEL, CAUTION (BACK) | | VS1 | △1-570-046-21 | (E,Saudi Arabia)....SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR) | |

SECTION 5
ELECTRICAL PARTS LIST

NOTE:



- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μ F, PF: μ F.

RESISTORS
• All resistors are in ohms.
• F: nonflammable

COILS
• MMH: mH, UH: μ H

SEMICONDUCTORS
In each case, U: μ , for example:
UA....: μ A...., UPA....: μ PA....,
UPC....: μ PC, UPD....: μ PD....

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description | Ref.No. | Part No. | Description |
|---------|---------------|---|---------|--------------|--------------------------|
| 901 | *1-628-748-11 | PC BOARD, SWITCH | C306 | 1-136-155-00 | FILM 0.015MF 5% 50V |
| 902 | *1-628-745-11 | PC BOARD, EQUALIZER | C307 | 1-136-175-00 | FILM 0.068MF 5% 50V |
| 903 | *1-628-747-11 | PC BOARD, INDICATION | C308 | 1-161-329-00 | CERAMIC 0.0068MF 20% 16V |
| 904 | *A-4380-087-A | MOUNTED PCB, SPECTRUM ANALYZER | C309 | 1-163-157-00 | FILM 0.022MF 5% 50V |
| 905 | *1-628-749-11 | PC BOARD, TRANSLATION | C310 | 1-161-375-00 | CERAMIC 0.0022MF 20% 16V |
| 906 | *1-628-744-11 | PC BOARD, MAIN | C311 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| 907 | *1-631-082-11 | PC BOARD, POWER | C312 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| 908 | △1-526-751-00 | (UK).....OUTLET, AC | C313 | 1-161-377-00 | CERAMIC 0.0047MF 20% 16V |
| | △1-526-882-00 | (E,Saudi Arabia).....OUTLET, AC | C314 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| | △1-526-794-11 | (AEP,West Germany)...OUTLET, AC | C315 | 1-124-963-11 | ELECT 33MF 20% 16V |
| 909 | 1-533-213-31 | (AEP,West Germany)...HOLDER FUSE | C316 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| | | | C351 | 1-124-465-00 | ELECT 0.47MF 20% 50V |
| 910 | △1-551-188-XX | (E).....CORD, POWER | C352 | 1-136-175-00 | FILM 0.068MF 5% 50V |
| | △1-555-750-00 | (AEP,West Germany,Saudi Arabia).....CORD, POWER | C353 | 1-124-464-11 | ELECT 0.22MF 20% 50V |
| | △1-556-562-11 | (UK)....CORD, POWER | C354 | 1-136-171-00 | FILM 0.033MF 5% 50V |
| 911 | △1-506-401-00 | (Saudi Arabia)...ADAPTOR, CONVERSION | C355 | 1-124-463-00 | ELECT 0.1MF 20% 50V |
| | △1-526-565-00 | (E).....AC PLUG ADAPTOR | C356 | 1-136-155-00 | FILM 0.015MF 5% 50V |
| | | | C357 | 1-136-175-00 | FILM 0.068MF 5% 50V |
| C101 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C358 | 1-161-329-00 | CERAMIC 0.0068MF 20% 16V |
| C102 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C359 | 1-163-157-00 | FILM 0.022MF 5% 50V |
| C103 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C360 | 1-161-375-00 | CERAMIC 0.0022MF 20% 16V |
| C104 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C361 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C105 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C362 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C106 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C363 | 1-161-377-00 | CERAMIC 0.0047MF 20% 16V |
| C107 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C364 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C108 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C365 | 1-124-119-00 | ELECT 330MF 20% 16V |
| C151 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C401 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C152 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C402 | 1-162-215-31 | CERAMIC 47PF 5% 50V |
| C153 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C403 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C154 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C404 | 1-136-158-00 | FILM 0.027MF 5% 50V |
| C155 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C405 | 1-136-158-00 | FILM 0.027MF 5% 50V |
| C156 | 1-162-215-31 | CERAMIC 47PF 5% 50V | C406 | 1-162-215-31 | CERAMIC 47PF 5% 50V |
| C157 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C407 | 1-123-382-00 | ELECT 3.3MF 20% 50V |
| C158 | 1-124-925-11 | ELECT 2.2MF 20% 50V | C408 | 1-123-382-00 | ELECT 3.3MF 20% 50V |
| C201 | 1-126-101-11 | ELECT 100MF 20% 16V | C409 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C202 | 1-126-101-11 | ELECT 100MF 20% 16V | C410 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C203 | 1-126-233-11 | ELECT 22MF 20% 25V | C411 | 1-162-215-31 | CERAMIC 47PF 5% 50V |
| C204 | 1-126-177-11 | ELECT 100MF 20% 6.3V | C412 | 1-123-382-00 | ELECT 3.3MF 20% 50V |
| C206 | 1-124-902-00 | ELECT 0.47MF 20% 50V | C413 | 1-130-479-00 | MYLAR 0.0047MF 5% 50V |
| C207 | 1-126-233-11 | ELECT 22MF 20% 25V | C414 | 1-130-479-00 | MYLAR 0.0047MF 5% 50V |
| C209 | 1-124-464-11 | ELECT 0.22MF 20% 50V | C415 | 1-162-215-31 | CERAMIC 47PF 5% 50V |
| C251 | 1-126-101-11 | ELECT 100MF 20% 16V | C416 | 1-123-382-00 | ELECT 3.3MF 20% 50V |
| C252 | 1-124-902-00 | ELECT 0.47MF 20% 50V | C417 | 1-130-477-00 | MYLAR 0.0033MF 5% 50V |
| C301 | 1-124-465-00 | ELECT 0.47MF 20% 50V | C418 | 1-130-477-00 | MYLAR 0.0033MF 5% 50V |
| C302 | 1-136-175-00 | FILM 0.068MF 5% 50V | C419 | 1-162-215-31 | CERAMIC 47PF 5% 50V |
| C303 | 1-124-464-11 | ELECT 0.22MF 20% 50V | | | |
| C304 | 1-136-171-00 | FILM 0.033MF 5% 50V | | | |
| C305 | 1-124-463-00 | ELECT 0.1MF 20% 50V | | | |

| Ref.No. | Part No. | Description | | | | |
|---------|--------------|-------------|----------|-----|-----|--|
| C420 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C421 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C422 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C423 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C424 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C425 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C426 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C427 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C428 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C429 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C430 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C431 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C432 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C433 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C434 | 1-102-119-00 | CERAMIC | 0.0015MF | 10% | 50V | |
| C435 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C436 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C437 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V | |
| C449 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | |
| C451 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C452 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C453 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C454 | 1-136-158-00 | FILM | 0.027MF | 5% | 50V | |
| C455 | 1-136-158-00 | FILM | 0.027MF | 5% | 50V | |
| C456 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C457 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C458 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C459 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V | |
| C460 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V | |
| C461 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C462 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C463 | 1-130-479-00 | MYLAR | 0.0047MF | 5% | 50V | |
| C464 | 1-130-479-00 | MYLAR | 0.0047MF | 5% | 50V | |
| C465 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C466 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C467 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C468 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C469 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C470 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C471 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C472 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C473 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C474 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C475 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C476 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C477 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C478 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C479 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C480 | 1-130-477-00 | MYLAR | 0.0033MF | 5% | 50V | |
| C481 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V | |
| C482 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C483 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V | |
| C484 | 1-102-119-00 | CERAMIC | 0.0015MF | 10% | 50V | |
| C485 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C486 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C487 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V | |
| C499 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | |

| Ref.No. | Part No. | Description | | | | |
|----------|--------------|--------------------------------|--------|-----|------|--|
| C601 | 1-102-355-00 | CERAMIC | 0.01MF | | 250V | |
| C602 | 1-124-480-11 | ELECT | 470MF | 20% | 25V | |
| C603 | 1-124-480-11 | ELECT | 470MF | 20% | 25V | |
| C604 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C605 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C606 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C607 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| C608 | 1-124-912-11 | ELECT | 330MF | 20% | 50V | |
| C609 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | |
| C610 | 1-124-477-11 | ELECT | 47MF | 20% | 25V | |
| CNJ103*1 | 565-971-11 | SOCKET, CONNECTOR(PC BOARD) 9P | | | | |
| CNJ106 | 1-565-258-11 | JACK, PIN 4P (LINE IN/OUT) | | | | |
| CNP101*1 | 564-342-11 | PIN, CONNECTOR 8P | | | | |
| CNP107*1 | 564-338-00 | PIN, CONNECTOR 4P | | | | |
| CNP108*1 | 564-338-00 | PIN, CONNECTOR 4P | | | | |
| CNP109*1 | 564-336-00 | PIN, CONNECTOR 2P | | | | |
| CNP401*1 | 565-968-11 | PIN, CONNECTOR (PC BOARD) 9P | | | | |
| CNP601*1 | 564-338-00 | PIN, CONNECTOR 4P | | | | |
| D201 | 8-719-933-41 | DIODE HZS6C3L | | | | |
| D301 | 8-719-311-74 | DIODE SEL9107-G-D | | | | |
| D302 | 8-719-000-26 | DIODE US1060M | | | | |
| D401 | 8-719-000-26 | DIODE US1060M | | | | |
| D402 | 8-719-000-26 | DIODE US1060M | | | | |
| D403 | 8-719-000-26 | DIODE US1060M | | | | |
| D404 | 8-719-000-26 | DIODE US1060M | | | | |
| D405 | 8-719-000-26 | DIODE US1060M | | | | |
| D406 | 8-719-000-26 | DIODE US1060M | | | | |
| D407 | 8-719-000-26 | DIODE US1060M | | | | |
| D408 | 8-719-000-26 | DIODE US1060M | | | | |
| D409 | 8-719-000-26 | DIODE US1060M | | | | |
| D410 | 8-719-000-26 | DIODE US1060M | | | | |
| D411 | 8-719-000-26 | DIODE US1060M | | | | |
| D412 | 8-719-000-26 | DIODE US1060M | | | | |
| D413 | 8-719-000-26 | DIODE US1060M | | | | |
| D414 | 8-719-000-26 | DIODE US1060M | | | | |
| D415 | 8-719-000-26 | DIODE US1060M | | | | |
| D416 | 8-719-000-26 | DIODE US1060M | | | | |
| D451 | 8-719-000-26 | DIODE US1060M | | | | |
| D452 | 8-719-000-26 | DIODE US1060M | | | | |
| D453 | 8-719-000-26 | DIODE US1060M | | | | |
| D454 | 8-719-000-26 | DIODE US1060M | | | | |
| D455 | 8-719-000-26 | DIODE US1060M | | | | |
| D456 | 8-719-000-26 | DIODE US1060M | | | | |
| D457 | 8-719-000-26 | DIODE US1060M | | | | |
| D458 | 8-719-000-26 | DIODE US1060M | | | | |
| D459 | 8-719-000-26 | DIODE US1060M | | | | |
| D460 | 8-719-000-26 | DIODE US1060M | | | | |
| D461 | 8-719-000-26 | DIODE US1060M | | | | |
| D462 | 8-719-000-26 | DIODE US1060M | | | | |
| D463 | 8-719-000-26 | DIODE US1060M | | | | |
| D464 | 8-719-000-26 | DIODE US1060M | | | | |
| D465 | 8-719-000-26 | DIODE US1060M | | | | |
| D601 | 8-719-200-77 | DIODE 10E2N | | | | |
| D602 | 8-719-200-77 | DIODE 10E2N | | | | |
| D603 | 8-719-200-77 | DIODE 10E2N | | | | |
| D604 | 8-719-200-77 | DIODE 10E2N | | | | |
| D605 | 8-719-933-70 | DIODE UZL-11C2L | | | | |

| Ref.No. | Part No. | Description | | | | |
|---------|---------------|--|--|--|--|--|
| D606 | 8-719-000-27 | DIODE US1060M | | | | |
| D607 | 8-719-200-77 | DIODE 10E2N | | | | |
| D608 | 8-719-000-69 | DIODE UZL-6H2 | | | | |
| D609 | 8-719-000-26 | DIODE US1060M | | | | |
| D610 | 8-719-000-26 | DIODE US1060M | | | | |
| D611 | 8-719-000-26 | DIODE US1060M | | | | |
| F601 | Δ1-532-078-00 | (AEP, West Germany) ...FUSE, TIME LAG(1A) | | | | |
| FL401 | 1-519-494-11 | INDICATOR TUBE, FLUORESCENT | | | | |
| FL451 | 1-519-494-11 | INDICATOR TUBE, FLUORESCENT | | | | |
| IC101 | 8-759-140-27 | IC UPD4027BC | | | | |
| IC102 | 8-759-601-02 | IC M5218P | | | | |
| IC151 | 8-759-800-37 | IC LC4066BH | | | | |
| IC152 | 8-759-601-02 | IC M5218P | | | | |
| IC401 | 8-759-701-12 | IC CXA4559P | | | | |
| IC402 | 8-759-701-12 | IC CXA4559P | | | | |
| IC403 | 8-759-701-12 | IC CXA4559P | | | | |
| IC404 | 8-759-701-12 | IC CXA4559P | | | | |
| IC410 | 8-759-820-07 | IC LC7566 | | | | |
| IC451 | 8-759-701-12 | IC CXA4559P | | | | |
| IC452 | 8-759-701-12 | IC CXA4559P | | | | |
| IC453 | 8-759-701-12 | IC CXA4559P | | | | |
| IC454 | 8-759-701-12 | IC CXA4559P | | | | |
| IC460 | 8-759-820-07 | IC LC7566 | | | | |
| Q101 | 8-729-900-36 | TRANSISTOR 2SC3400 | | | | |
| Q102 | 8-729-900-63 | TRANSISTOR DTA124ES | | | | |
| Q103 | 8-729-119-78 | TRANSISTOR 2SC2785HFE | | | | |
| Q104 | 8-729-900-63 | TRANSISTOR DTA124ES | | | | |
| Q106 | 8-729-141-26 | TRANSISTOR 2SC3622A-LK | | | | |
| Q107 | 8-729-900-63 | TRANSISTOR DTA124ES | | | | |
| Q156 | 8-729-141-26 | TRANSISTOR 2SC3622A-LK | | | | |
| Q201 | 8-729-808-76 | TRANSISTOR 2SD1761-E | | | | |
| Q301 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q302 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q303 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q304 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q305 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q306 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q307 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q351 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q352 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q353 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q354 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q355 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q356 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q357 | 8-729-820-23 | TRANSISTOR 2SC3330 | | | | |
| Q601 | 8-729-808-76 | TRANSISTOR 2SD1761-E | | | | |
| Q602 | 8-729-806-28 | TRANSISTOR 2SC3402 | | | | |
| Q603 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | | | | |
| Q604 | 8-729-920-91 | TRANSISTOR 2SB1187-F | | | | |
| Q605 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | | | | |
| Q606 | 8-729-802-22 | TRANSISTOR 2SB1014 | | | | |
| Q607 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | | |
| Q608 | 8-729-900-63 | TRANSISTOR DTA124ES | | | | |
| R101 | 1-247-903-00 | CARBON 1M 5% 1/4W | | | | |
| R102 | 1-249-417-11 | CARBON 1K 5% 1/4W | | | | |
| R103 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |

| Ref.No. | Part No. | Description | | | | |
|---------|--------------|---------------------|--|--|--|--|
| R104 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R105 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |
| R106 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R107 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R108 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |
| R109 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | | | | |
| R110 | 1-249-417-11 | CARBON 1K 5% 1/4W | | | | |
| R111 | 1-249-417-11 | CARBON 1K 5% 1/4W | | | | |
| R112 | 1-247-903-00 | CARBON 1M 5% 1/4W | | | | |
| R113 | 1-249-437-11 | CARBON 47K 5% 1/4W | | | | |
| R114 | 1-249-417-11 | CARBON 1K 5% 1/4W | | | | |
| R151 | 1-247-903-00 | CARBON 1M 5% 1/4W | | | | |
| R152 | 1-249-417-11 | CARBON 1K 5% 1/4W | | | | |
| R153 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |
| R154 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R155 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |
| R156 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R157 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | | | | |
| R158 | 1-249-441-11 | CARBON 100K 5% 1/4W | | | | |
| R159 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | | | | |

| Ref.No. | Part No. | Description |
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|------|--------------|--------|------|----|------|
| R324 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R325 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R326 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R328 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R329 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R330 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R331 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R332 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R333 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R351 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R352 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R353 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R354 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R355 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R356 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R357 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R358 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R359 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R360 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R361 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R362 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R363 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R364 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R365 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R366 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R368 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R369 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R370 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R371 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R373 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R374 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R375 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R376 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R378 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R379 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R380 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R381 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| R401 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R402 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R403 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R404 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R405 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R406 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R407 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R408 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R409 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R410 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R411 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R412 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R413 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R414 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R415 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R416 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R417 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R418 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R419 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R420 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |

| Ref.No. | Part No. | Description |
|---------|----------|-------------|
|---------|----------|-------------|

| | | | | | |
|------|--------------|--------|------|----|------|
| R421 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R422 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R423 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R424 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R425 | 1-247-889-00 | CARBON | 270K | 5% | 1/4W |
| R426 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R427 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R428 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R429 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R430 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R431 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R432 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W |
| R433 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R434 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R435 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R437 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R438 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R439 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R440 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R441 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R451 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R452 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R453 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R454 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R455 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R456 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R457 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R458 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R459 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R460 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R461 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R462 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R463 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R464 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R465 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R466 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R467 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R468 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R469 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R470 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R471 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R472 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R473 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R474 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R475 | 1-247-889-00 | CARBON | 270K | 5% | 1/4W |
| R476 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R477 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R478 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R479 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R480 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R481 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R482 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W |
| R483 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R484 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R485 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R487 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R488 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |

Ref.No. Part No. Description



| | | | | | |
|------|--------------|--------|------|----|------|
| R489 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R490 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R491 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R501 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R502 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R503 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R504 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R505 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R506 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R507 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R508 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R509 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R510 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R511 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R512 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R513 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R514 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R515 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R516 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R517 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R518 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R519 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R551 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R552 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R553 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R554 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R555 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R556 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R557 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R558 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R559 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R560 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R561 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R562 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R563 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R564 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R565 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R566 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R567 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R568 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R569 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R603 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R604 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R605 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R606 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R607 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R608 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R609 | 1-247-844-11 | CARBON | 3.6K | 5% | 1/4W |
| R610 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R611 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R612 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R613 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R614 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R615 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |

Ref.No. Part No. Description

| | | | | | |
|-------|---------------|-----------------------------|--------------------------|---------|------|
| R616 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R617 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R618 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R619 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R620 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R621 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W |
| RV301 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (100Hz) | |
| RV302 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (250Hz) | |
| RV303 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (500Hz) | |
| RV304 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (1kHz) | |
| RV305 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (3kHz) | |
| RV306 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (6kHz) | |
| RV307 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (14kHz) | |
| RV351 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (100Hz) | |
| RV352 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (250Hz) | |
| RV353 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (500Hz) | |
| RV354 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (1kHz) | |
| RV355 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (3kHz) | |
| RV356 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (6kHz) | |
| RV357 | 1-238-375-11 | RES, VAR, SLIDE | 250K | (14kHz) | |
| S301 | 1-554-303-21 | SWITCH, KEY BOARD | (EQUALIZATION) | | |
| S401 | 1-571-292-11 | SWITCH, PUSH (1 KEY) | (POWER) | | |
| T901 | △1-449-721-11 | (AEP,UK,West Germany) | | | |
| | △1-449-722-11 | (E,Saudi Arabia)... | TRANSFORMER, POWER | | |
| TB601 | *1-535-139-00 | BASE POST 22MM (10MM PITCH) | 2P | | |
| TB602 | *1-535-140-00 | BASE POST 22MM (10MM PITCH) | 3P | | |
| TB603 | *1-535-120-00 | TERMINAL | | | |
| VS1 | △1-570-046-21 | (E,Saudi Arabia)... | SWITCH, VOLTAGE | | |
| | | | CHANGE(VOLTAGE SELECTOR) | | |

ACCESSORY & PACKING MATERIAL

| | |
|---------------|-------------------------|
| 1-558-543-11 | CORD, CONNECTION |
| 3-750-267-11 | (AEP,UK,E,Saudi Arabia) |
| | ...MANUAL, INSTRUCTION |
| 3-750-267-41 | (AEP,West Germany)... |
| | MANUAL, INSTRUCTION |
| *4-922-998-01 | CUSHION |
| *4-930-822-01 | INDIVIDUAL CARTON |

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

CDP-M77

SERVICE MANUAL

AEP Model
UK Model
E Model



| | |
|------------------------------------|---------|
| Model Name Using Similar Mechanism | CDP-M95 |
| CD Mechanism Name | CDM9-5 |
| Base Unit Name | BU-5C |

SPECIFICATION

Compact disc player

| | |
|-----------------------|----------------------------|
| Frequency response | 2 Hz – 20 kHz \pm 0.5 dB |
| Signal to noise ratio | More than 100 dB |
| Dynamic range | More than 95 dB |
| Harmonic distortion | Less than 0.003 % |
| Channel separation | More than 98 dB |

Outputs

| | |
|---|--|
| LINE OUT (FIXED) (phono jacks) | Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms |
| DIGITAL OUT (OPTICAL) (optical output connector) | Wave length 660 nm Output level – 18 dBm |
| HEADPHONES (stereo phone jack) | Output level max. 15 mW Load impedance 32 ohms |

General

| | |
|---|---|
| Power requirements | AEP model 220 V AC (or 240 V AC adjustable by Sony personnel), 50/60 Hz UK model 240 V AC (or 220 V AC adjustable by Sony personnel), 50/60 Hz E model 110 – 120 or 220 – 240 V AC adjustable, 50/60 Hz |
| Power consumption | 12 W |
| Dimensions (approx., including projections) | 355 \times 93 \times 310 mm (w/h/d) (14 \times 3 $\frac{3}{4}$ \times 12 $\frac{1}{4}$ inches) |
| Weight (approx.) | 3.5 kg (7 lbs 11 oz) |

Supplied accessories

| | |
|------------------------------|--------------------------------------|
| Audio cord | 1 (2 phono plugs – 2 phono plugs) |
| Remote commander | 1 |
| Sony SUM-3 (NS) batteries | 2 |

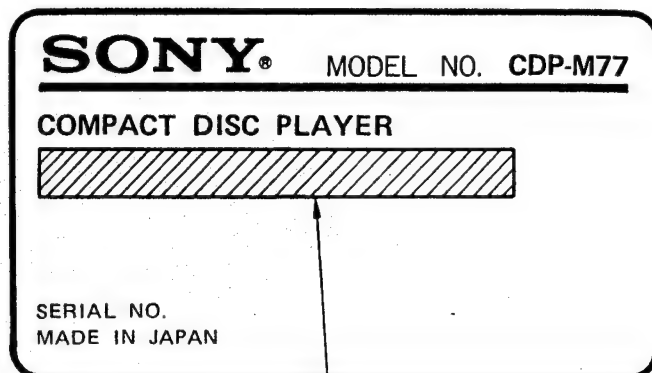
— Continued on next page —



COMPACT DISC PLAYER
SONY®

Remote commander (RM-D270)

| | |
|-----------------------|---|
| Remote control system | Infrared control |
| Power requirements | 3 V DC with two R6 (size AA) batteries |
| Dimensions | Approx. 67 × 20 × 175 mm (w/h/d) (2 ³ / ₄ × 1 ³ / ₁₆ × 7 inches) |
| Weight | Approx. 135 g (4 oz) Including batteries |

MODEL IDENTIFICATION— *Specification Labels* —**TABLE OF CONTENTS**



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AEP model: AC: 220 V ~ 50/60 Hz 12 W

UK model: AC: 240 V ~ 50/60 Hz 12 W

E model: AC: 110–120, 220–240 V ~ 50/60 Hz 12 W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1

SERVICING NOTES

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 44.6 μ W*

* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iverigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-dioe data

- Materiale: GaAlAs
- Bølgelængde: 780 nm
- Udstråling: Kontinuerlig
- Laseroutput: Max. 0,4 mW*

* Målt i 1,6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhed.

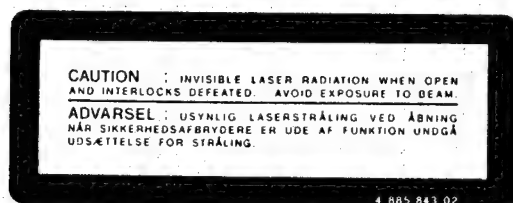
- Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

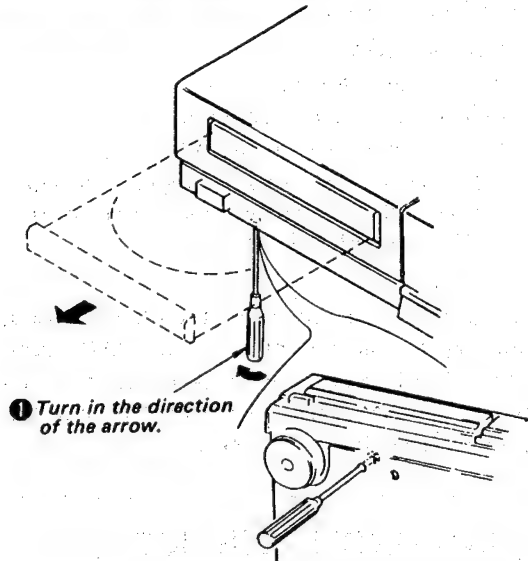
Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



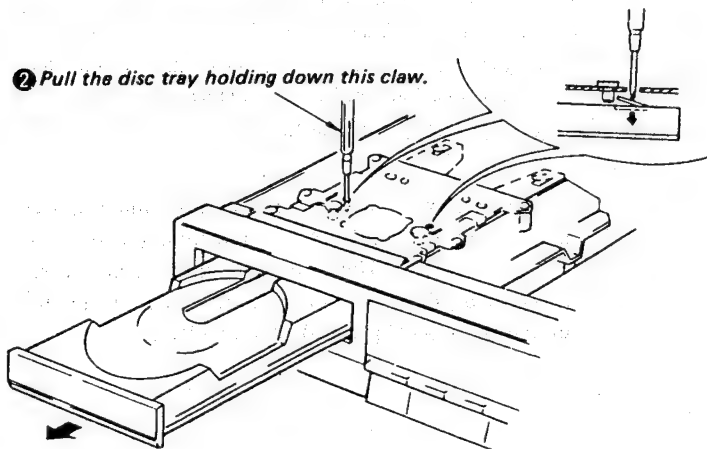
VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkömätöntä) silmille vaarallista lasersäteilyä.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



Caution: When you work, keep the set horizontal.

DISC TRAY REMOVAL



NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

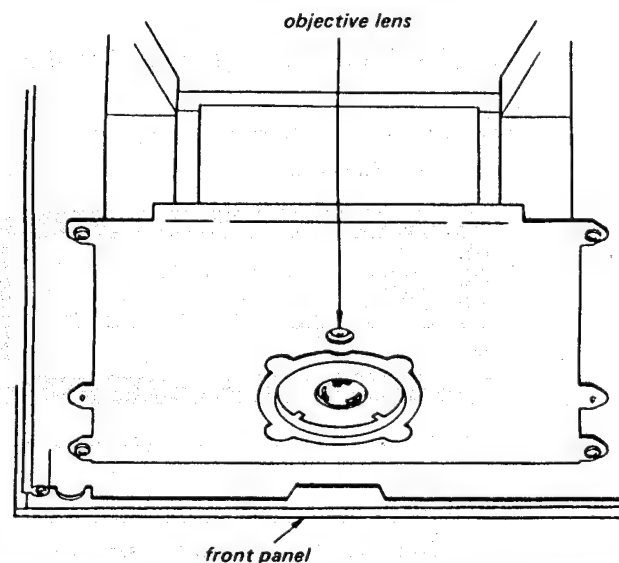
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.

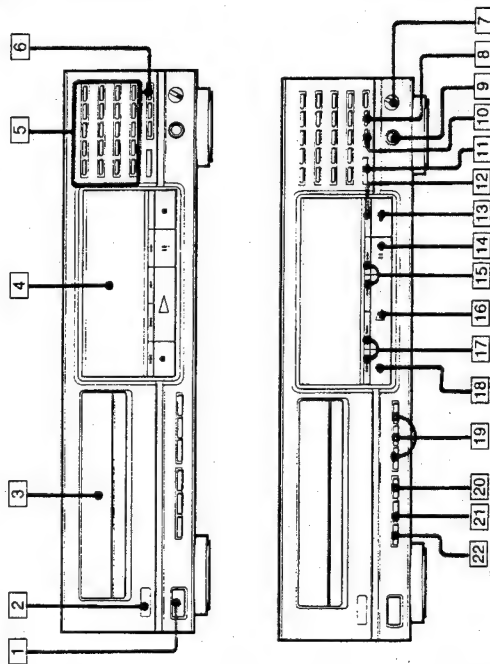


- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

SECTION 2 GENERAL

Location of Controls

Front Panel



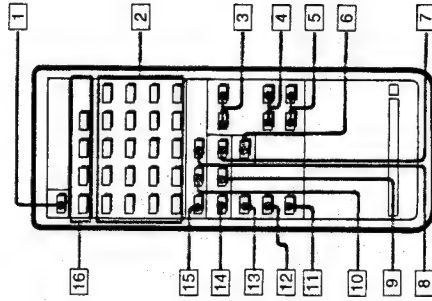
- 1 POWER switch
- 2 Remote sensor
- 3 Disc tray
- 4 Display window
- 5 Numeric buttons
- 6 CLEAR (program clear) button
- 7 HEADPHONE LEVEL control
- 8 CHECK (program check)
- 9 HEADPHONE jack
- 10 > 20 (over 20) button
- 11 FADER (FADE IN/FADE OUT) button
- 12 EDIT/TIME FADE button
- 13 ■ (stop) button

- 14 ■ (pause) button
- 15 ▲ (manual search) buttons
- 16 ▲ (play) button
- 17 ▲ (AMS*) buttons
- 18 ▲ (OPEN/CLOSE) button
- 19 PROGRAM button
- 20 SHUFFLE button
- 21 CONTINUE/SINGLE button
- 22 REPEAT button
- 23 AUTO SPACE (auto space) button
- 24 TIME button

* AMS is an abbreviation of Automatic Music Sensor.

Remote Commander

RM-D270



- 1 ▲ (open/close) button
- 2 Numeric buttons
- 3 ▲ (AMS) buttons
- 4 ▲ (manual search) buttons
- 5 ▲ (manual search) buttons
- 6 SLOW (low speed manual search) buttons
- 7 FADER (FADE IN/FADE OUT) button
- 8 TIME button
- 9 CLEAR (program clear) button
- 10 A ↔ B repeat button
- 11 CHECK button
- 12 ■ (stop) button
- 13 ■ (pause) button
- 14 ▲ (play) button
- 15 CLEAR/REPEAT (A ↔ B repeat clear/repeat) button
- 16 > 20 (over 20) button
- PGM (program) buttons
- SHUFFLE button
- CONTINUE button
- SINGLE button

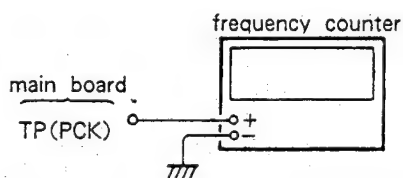
SECTION 3

ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than $10M\Omega$ impedance.

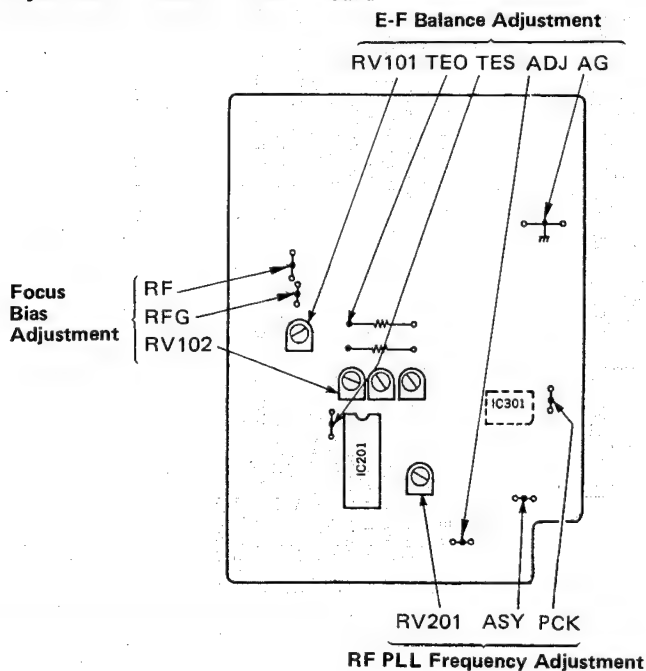
RF PLL Frequency Adjustment

Procedure :



1. Connect test point TP (ASY) to ground with jumper wire.
2. Turn POWER switch on.
3. Connect the frequency counter to test point TP (PCK).
4. Adjust RV201 so that the reading on frequency counter is $4.3218MHz \pm 30kHz$.
5. Remove lead wire connecting TP (ASY) and ground.
6. Put disc (YEDS-18) in and press \triangleright button.
7. Confirm that the reading on frequency counter is 4.3218MHz.

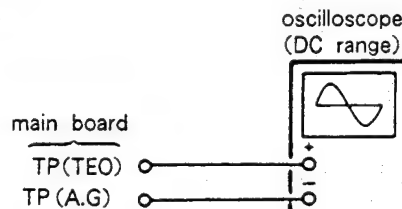
Adjustment Location : main board



E-F Balance Adjustment

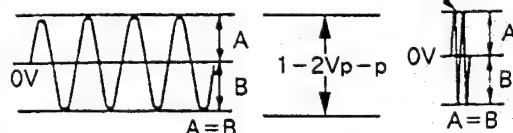
This adjustment should be made when replacing Optical Pick-up Block.

Procedure :



1. Connect test points TP (ADJ) and TP (TEI) to ground with jumper wires.
2. Connect oscilloscope to test points TP (TEO) and TP (A. G).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and playback the 6th selection.
5. Adjust RV101 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.

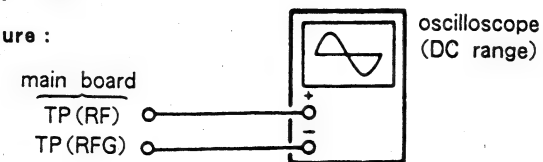
Note : Take sweep time as long as possible to obtain best waveform.



Focus Bias Adjustment

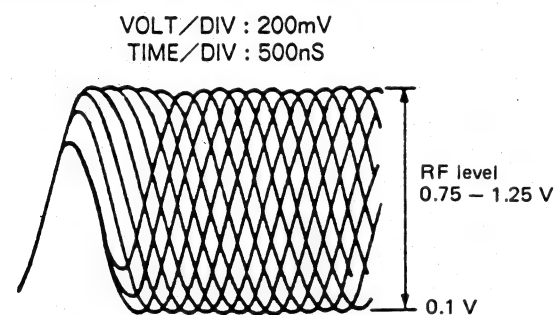
This adjustment should be made when replacing Optical Pick-up Block.

Procedure :



1. Connect oscilloscope to test points TP(RF) and TP (RF G).
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and playback the 6th selection.
4. Adjust RV102 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.

● RF Signal Reference Waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

REFERENCE

Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

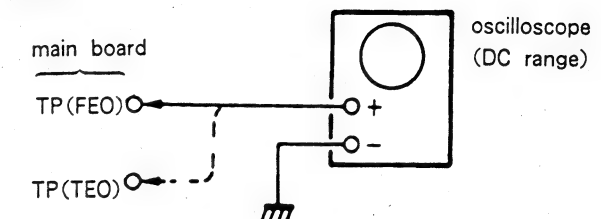
| Symptoms | Gain | Focus | Tracking |
|--|------|-------------|-------------|
| ● The time until music starts becomes longer for STOP → PLAY or automatic selection (M M buttons pressed.) (Normally takes about 2 seconds.) | | low | low or high |
| ● Music does not start and disc continues to rotate for STOP → PLAY or auto - matic selection (M M buttons pressed.) | | — | low |
| ● Disc table opens shortly after STOP → PLAY. | | low or high | — |
| ● Sound is interrupted during PLAY. Or time counter display stops progressing. | | — | low |
| ● More poise during 2-axis device operation. | | high | high |

The following is a simple adjustment method.

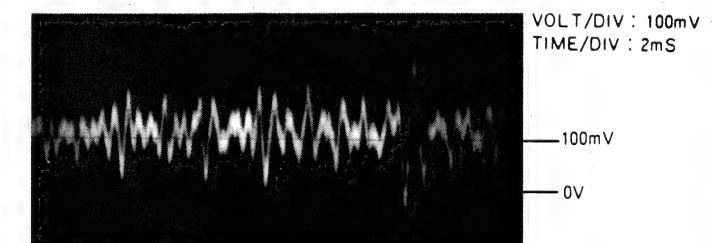
—Simple Adjustment—

Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

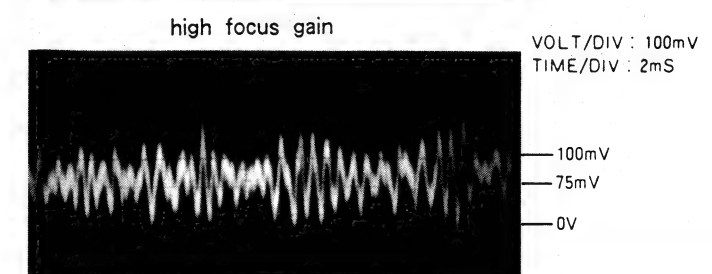
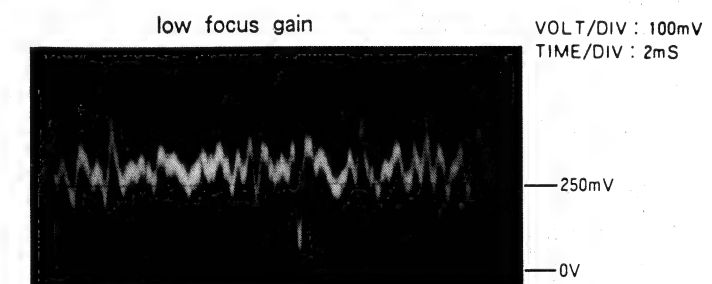
Procedure :



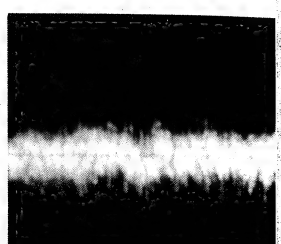
1. Keep the set horizontal.
(If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18) playback the 6th selection.
3. Connect oscilloscope to main board TP(FEO).
4. Adjust RV103 so that the waveform is as shown in the figure below. (focus gain adjustment)



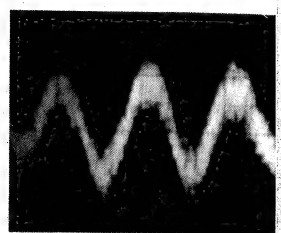
● Inccrrent Examples (DC level changes more than on adjusted waveform)



5. Connect oscilloscope
6. Adjust RV104 so tha



● Inccrrent Examples (low tracking



high tracking gain
(higher fundamental wave

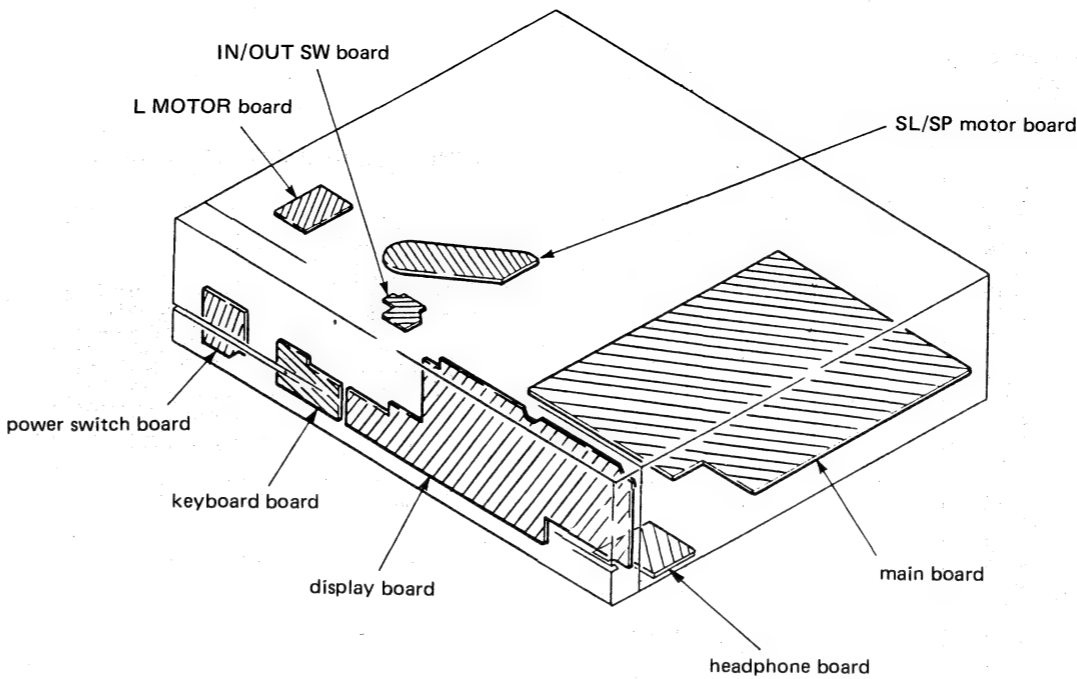


Adjustment Location : ma

Tracking Gain Adjustment { TEO RV104

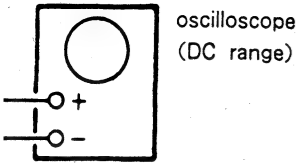
SECTION 4 DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION

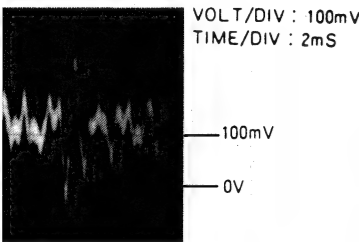


le adjustment method.

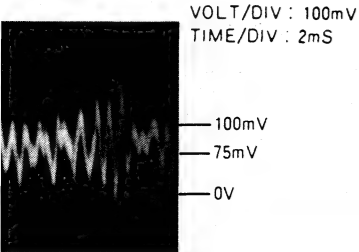
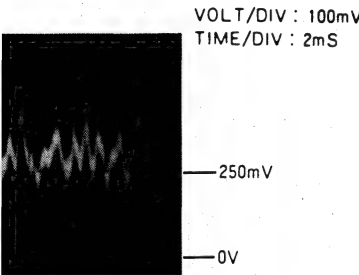
ment cannot be performed.
ions of the controls before
ment. If the positions after the
only a little different, return
original position.



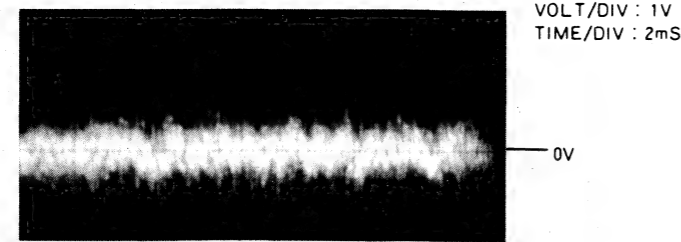
tal, this adjustment cannot be
ivity against the 2 axis device.)
playback the 6th selection.
main board TP(FEO).
he waveform is as shown in
s gain adjustment)



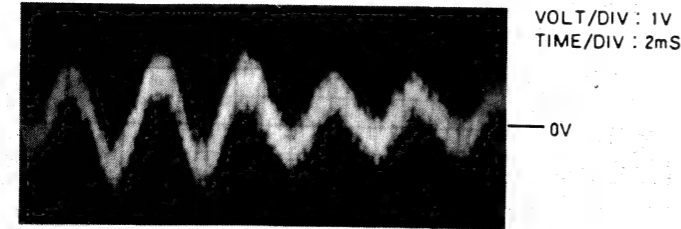
level changes more than on



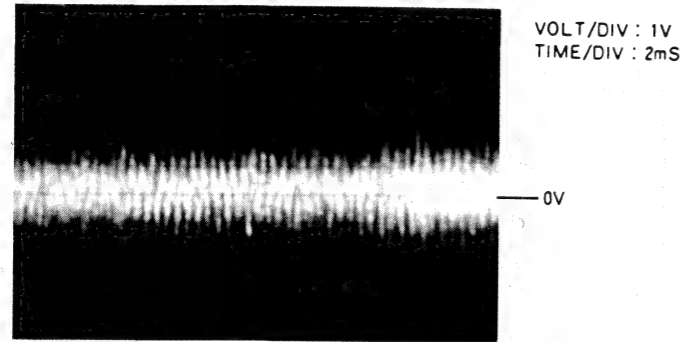
5. Connect oscilloscope to main board TP(TEO).
6. Adjust RV104 so that the waveform is as shown in the figure below. (tracking gain adjustment)



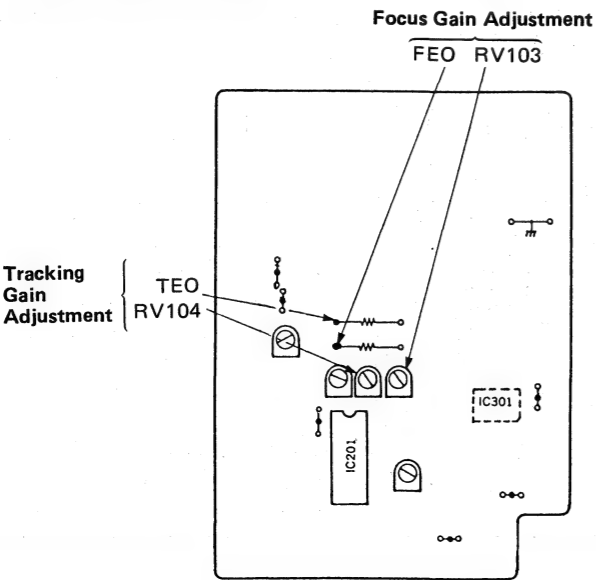
● Incorrect Examples (fundamental wave appears)
low tracking gain



high tracking gain
(higher fundamental wave than for low gain)



Adjustment Location : main board



4-2. PRINTED WIRING BOARDS

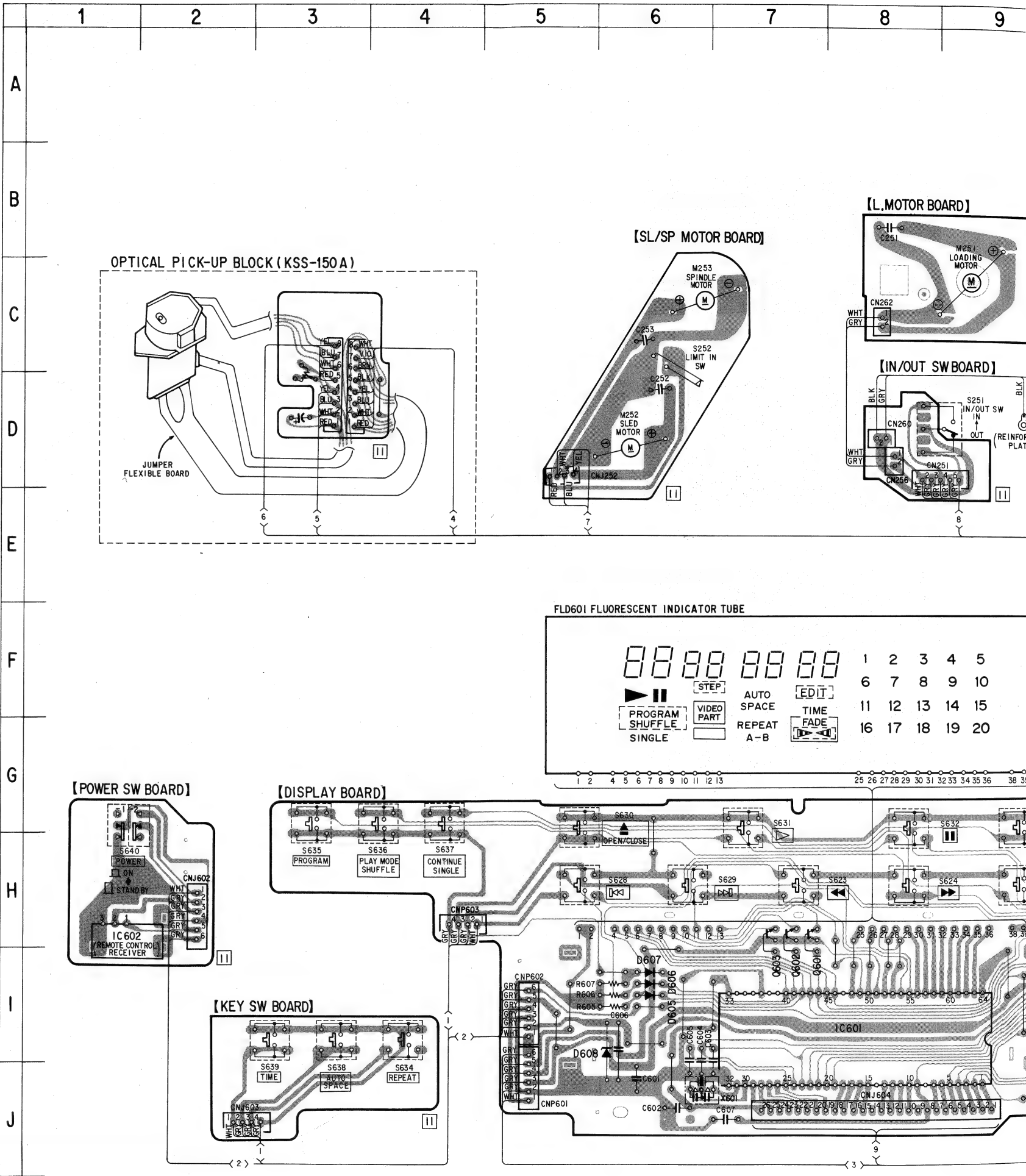
• See page 22 for Semiconductor Lead Layouts.

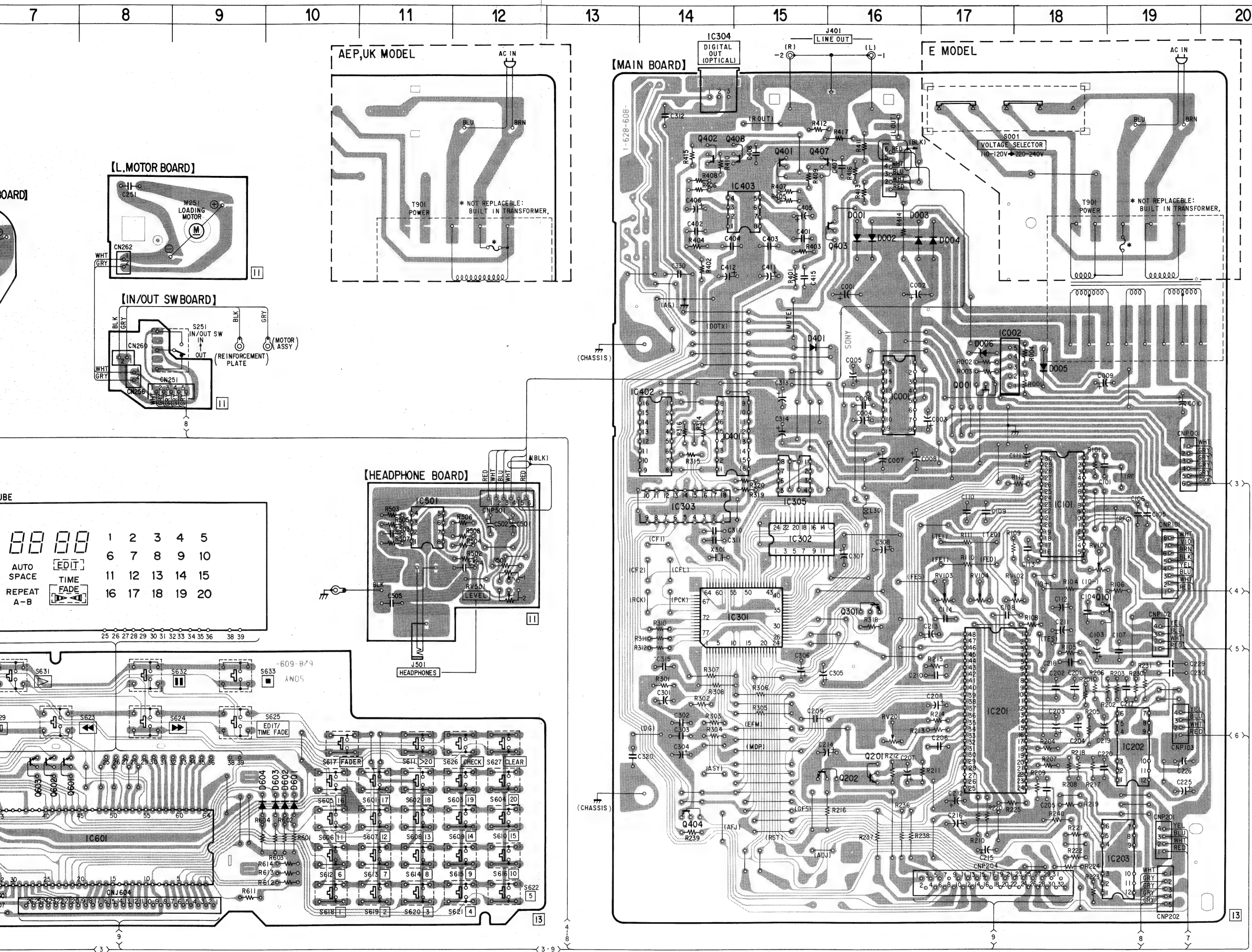
Note:

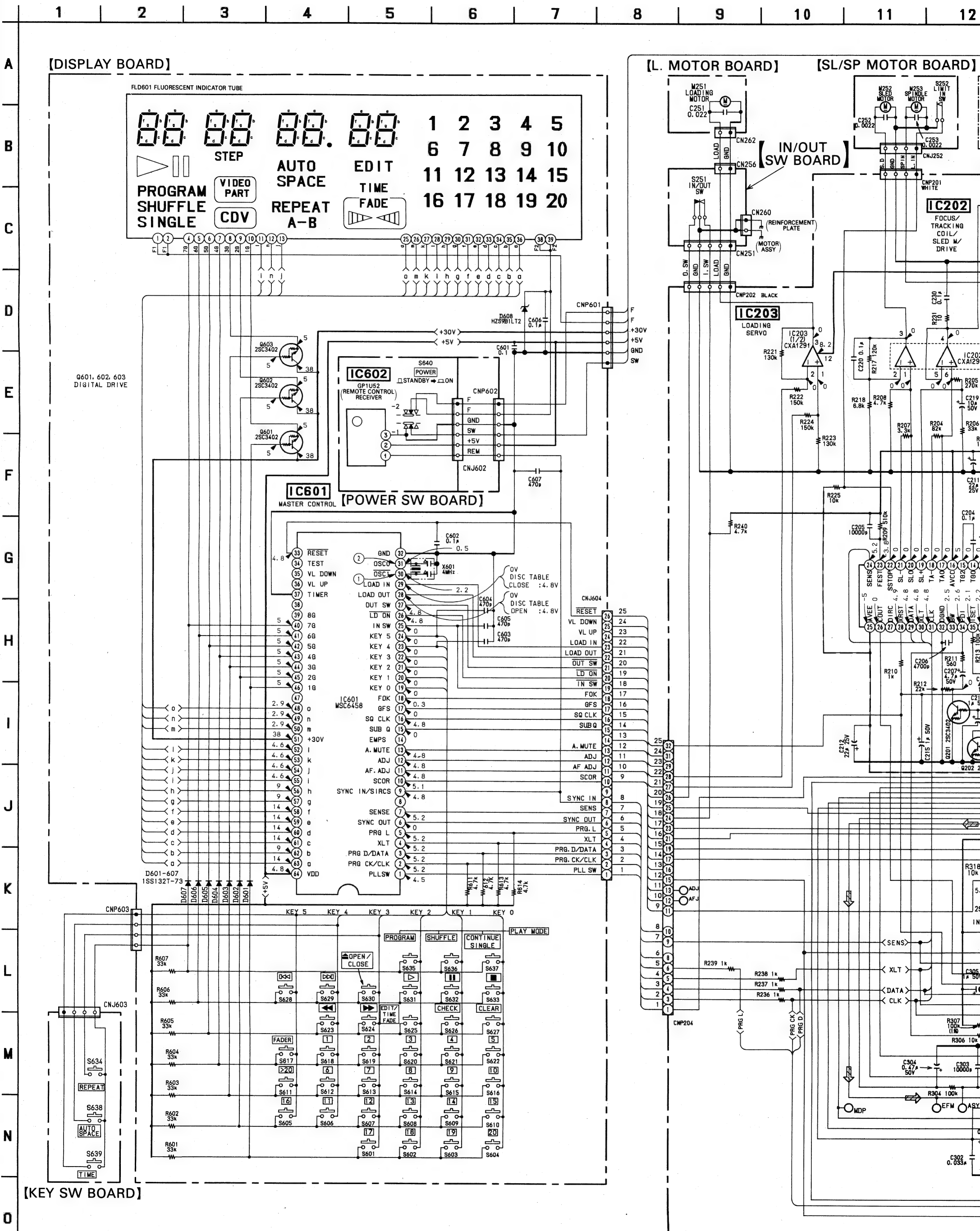
- — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- : parts mounted on the conductor side.

• Semiconductor Location

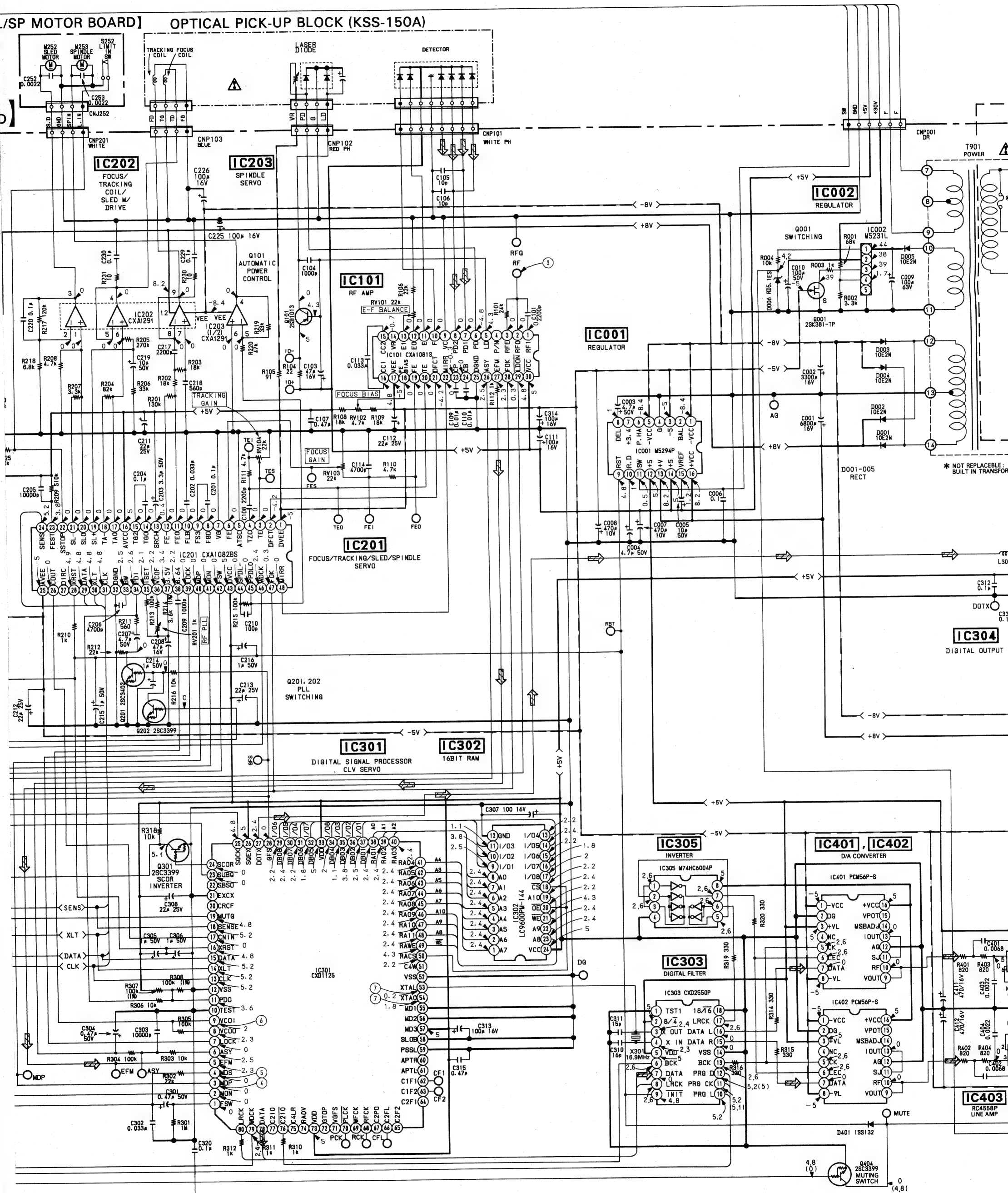
| Ref. No. | Location |
|----------|----------|
| D001 | C-16 |
| D002 | C-16 |
| D003 | C-17 |
| D004 | C-17 |
| D005 | D-18 |
| D006 | D-17 |
| D401 | D-15 |
| D601 | I-10 |
| D602 | I-10 |
| D603 | I-10 |
| D604 | I-9 |
| D605 | I-6 |
| D606 | I-6 |
| D607 | I-6 |
| D608 | I-6 |
| IC001 | D-16 |
| IC002 | D-17 |
| IC101 | F-18 |
| IC201 | H-17 |
| IC202 | H-19 |
| IC203 | I-19 |
| IC301 | G-15 |
| IC302 | F-15 |
| IC303 | F-14 |
| IC304 | A-14 |
| IC305 | F-15 |
| IC401 | E-14 |
| IC402 | E-14 |
| IC403 | B-15 |
| IC501 | F-11 |
| IC601 | I-8 |
| IC602 | H-1 |
| Q001 | D-17 |
| Q101 | G-19 |
| Q201 | I-16 |
| Q202 | I-16 |
| Q301 | G-16 |
| Q401 | C-15 |
| Q402 | B-14 |
| Q403 | C-16 |
| Q404 | I-14 |
| Q407 | B-15 |
| Q408 | B-15 |
| Q601 | H-7 |
| Q602 | H-7 |
| Q603 | H-7 |

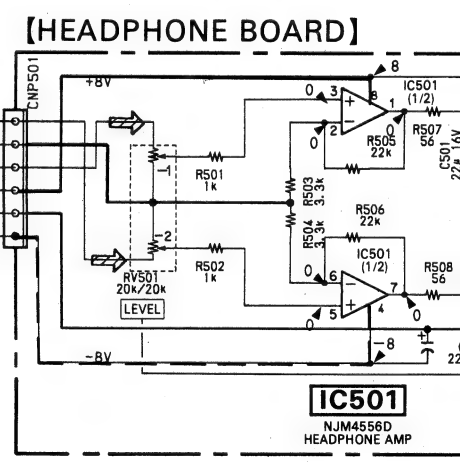
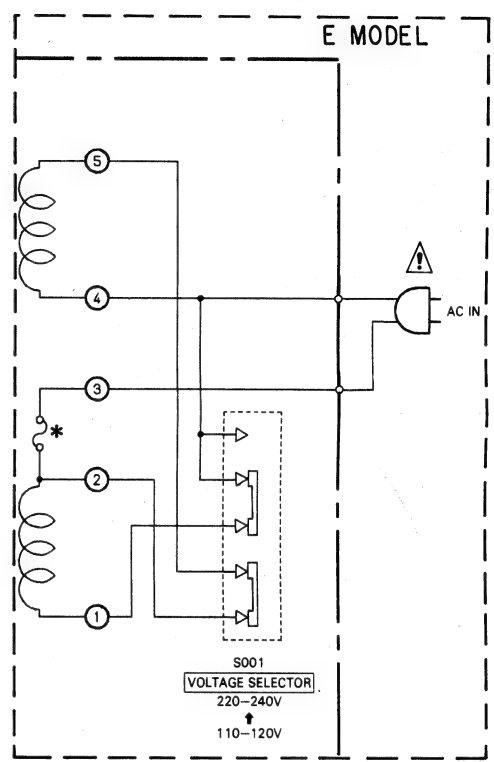


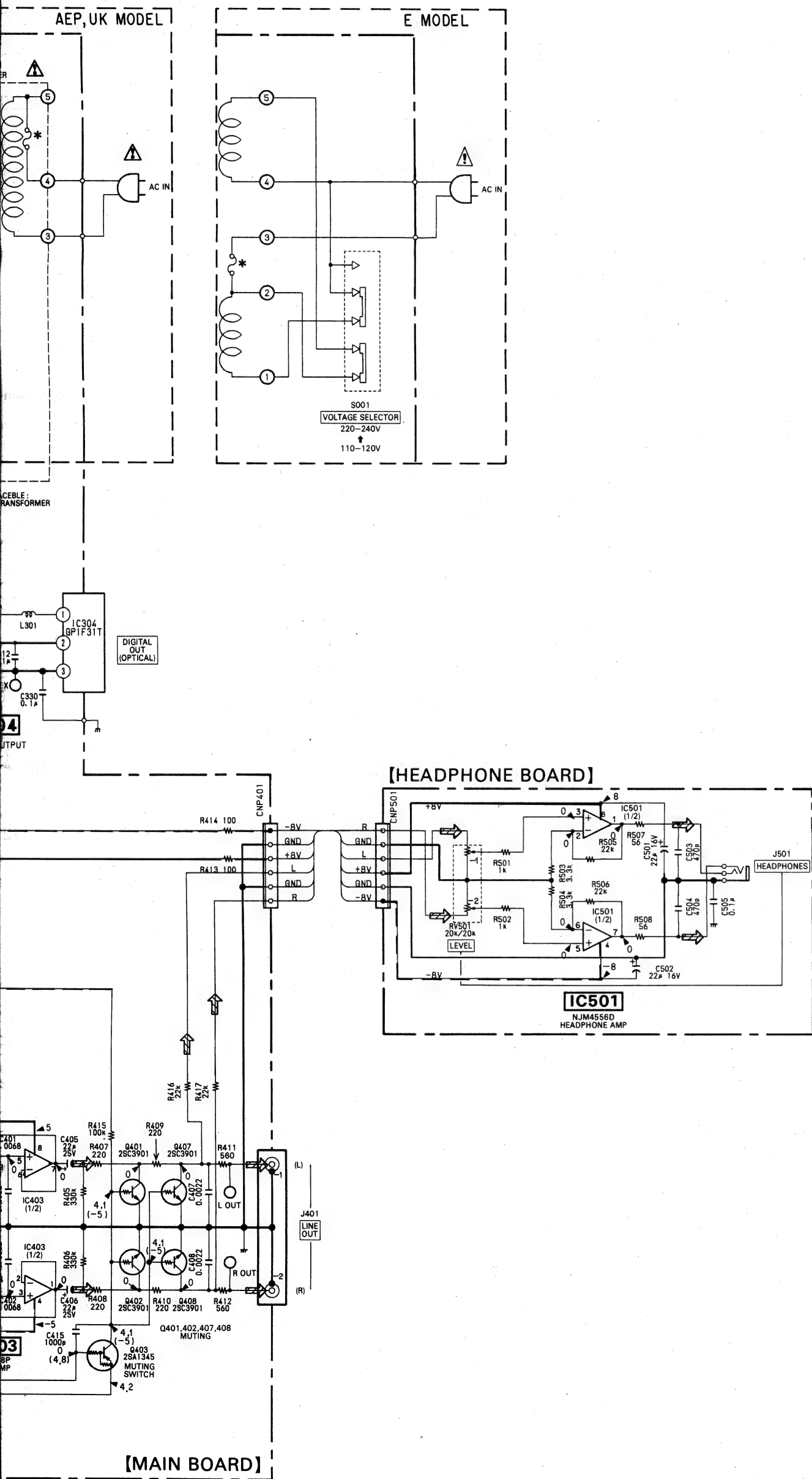








OPTICAL PICK-UP BLOCK (KSS-150A)









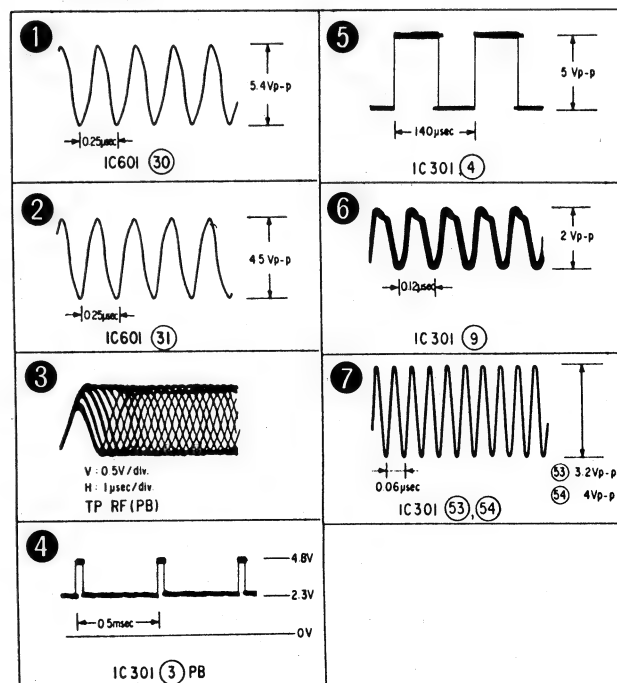
Note:

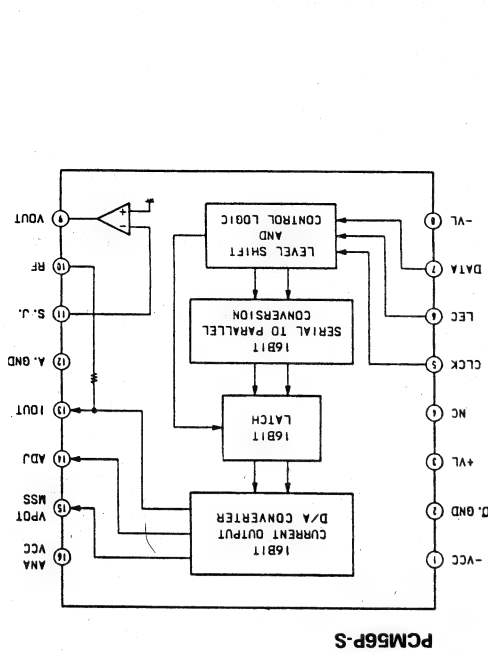
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark: STOP
() : PLAY
- Voltages are taken with a VOM (50 $\text{k}\Omega/\text{V}$).
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 : CD
- Switch

| Ref. No | Switch | Position |
|---------|---------------------|----------|
| S001 | VOLTAGE SELECTOR(E) | 110—120V |
| S251 | IN/OUT | OUT |
| S252 | LIMIT IN | OFF |
| S601 | 17 | OFF |
| S602 | 18 | OFF |
| S603 | 19 | OFF |
| S604 | 20 | OFF |
| S605 | 16 | OFF |
| S606 | 11 | OFF |
| S607 | 12 | OFF |
| S608 | 13 | OFF |
| S609 | 14 | OFF |
| S610 | 15 | OFF |
| S611 | >20 | OFF |
| S612 | 6 | OFF |
| S613 | 7 | OFF |
| S614 | 8 | OFF |
| S615 | 9 | OFF |
| S616 | 10 | OFF |
| S617 | FADER | OFF |
| S618 | 1 | OFF |
| S619 | 2 | OFF |
| S620 | 3 | OFF |
| S621 | 4 | OFF |
| S622 | 5 | OFF |
| S623 | ◀◀ | OFF |
| S624 | ▶▶ | OFF |
| S625 | EDIT/TIME FADE | OFF |
| S626 | CHECK | OFF |
| S627 | CLEAR | OFF |
| S628 | ⏮ | OFF |
| S629 | ⏭ | OFF |
| S630 | ▲OPEN/CLOSE | OFF |
| S631 | ▷ | OFF |
| S632 | | OFF |
| S633 | ■ | OFF |
| S634 | REPEAT | OFF |
| S635 | PROGRAM | OFF |
| S636 | SHUFFLE | OFF |
| S637 | CONTINUE SINGLE | OFF |
| S638 | AUTO SPACE | OFF |
| S639 | TIME | OFF |
| S640 | POWER | OFF |

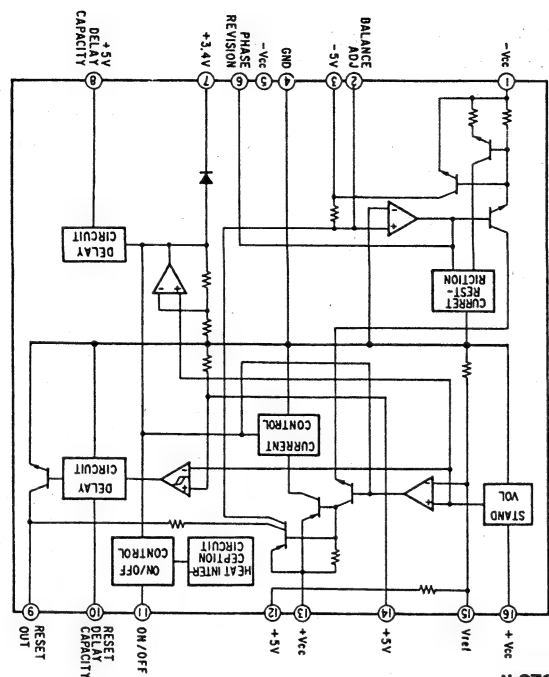
Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

- **Waveforms**

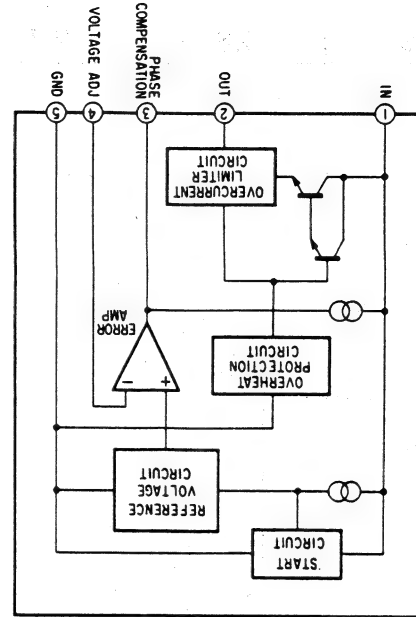




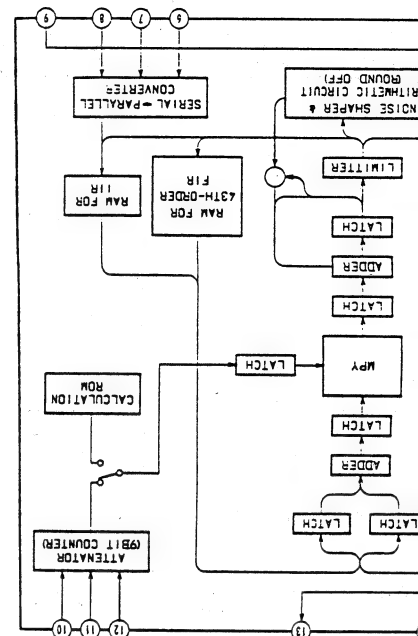
PCMB5P-S



MS294P



MS231TL



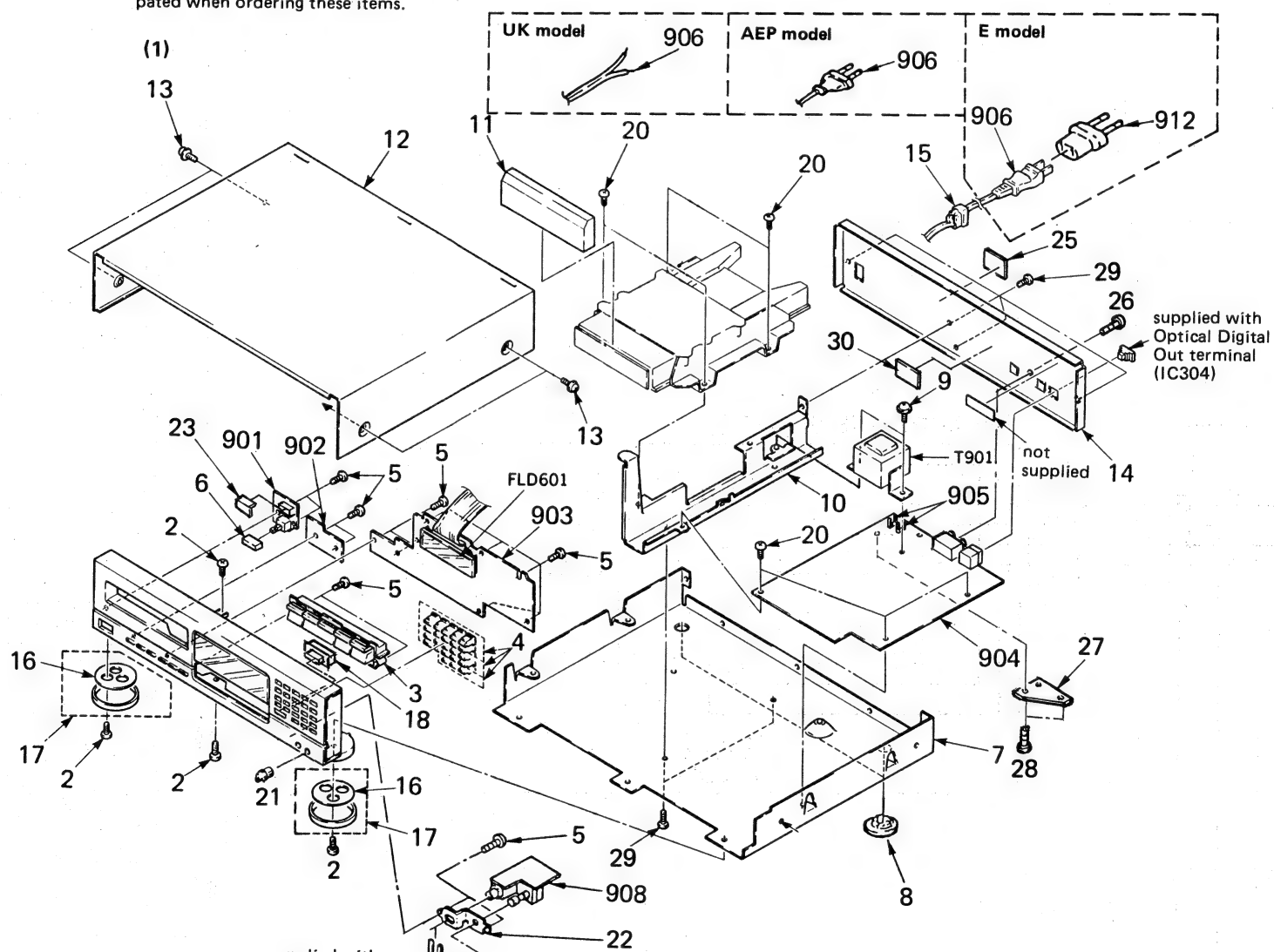
SECTION 5 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

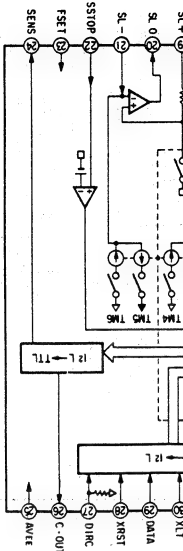
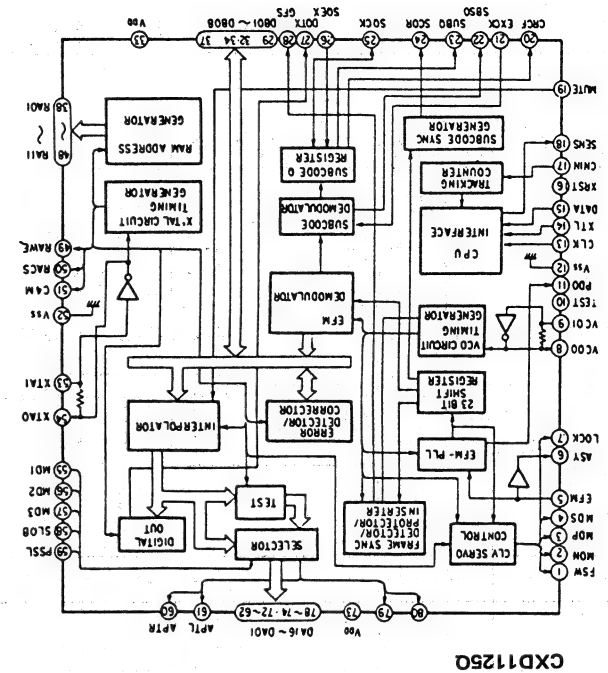
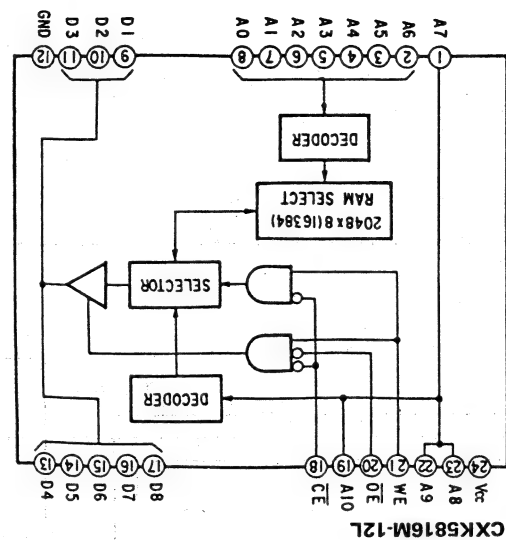
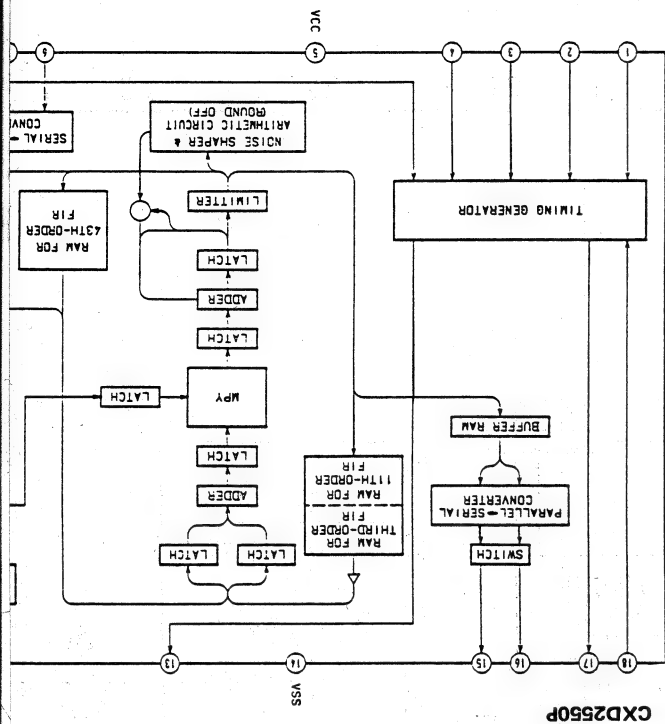
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.



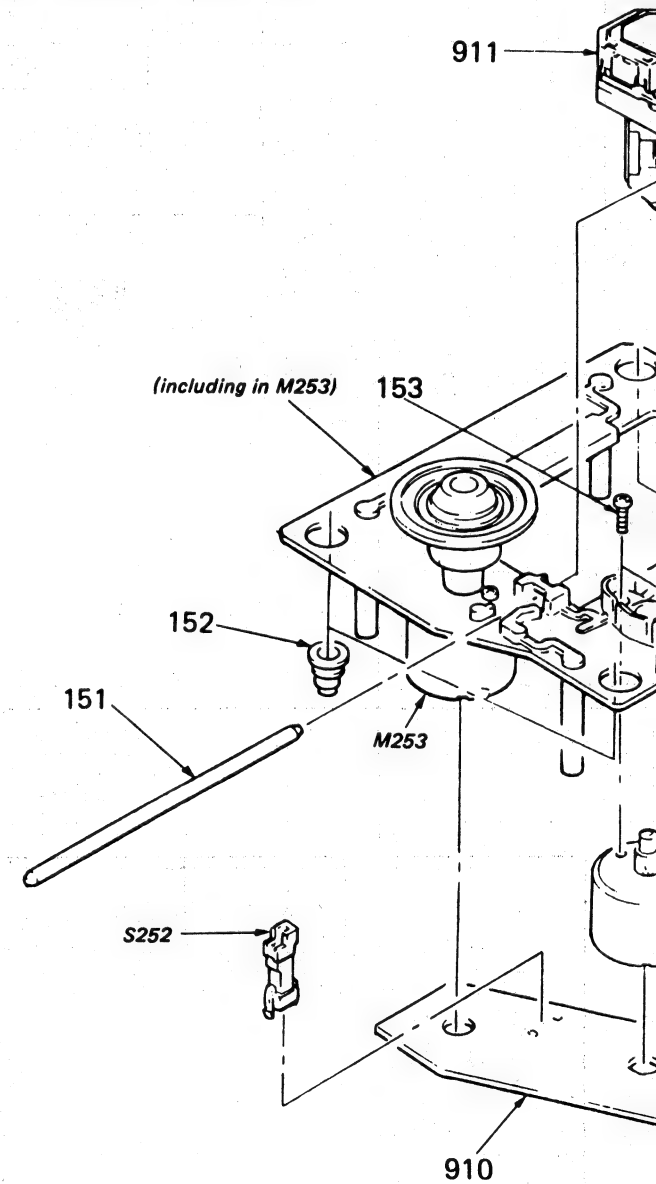
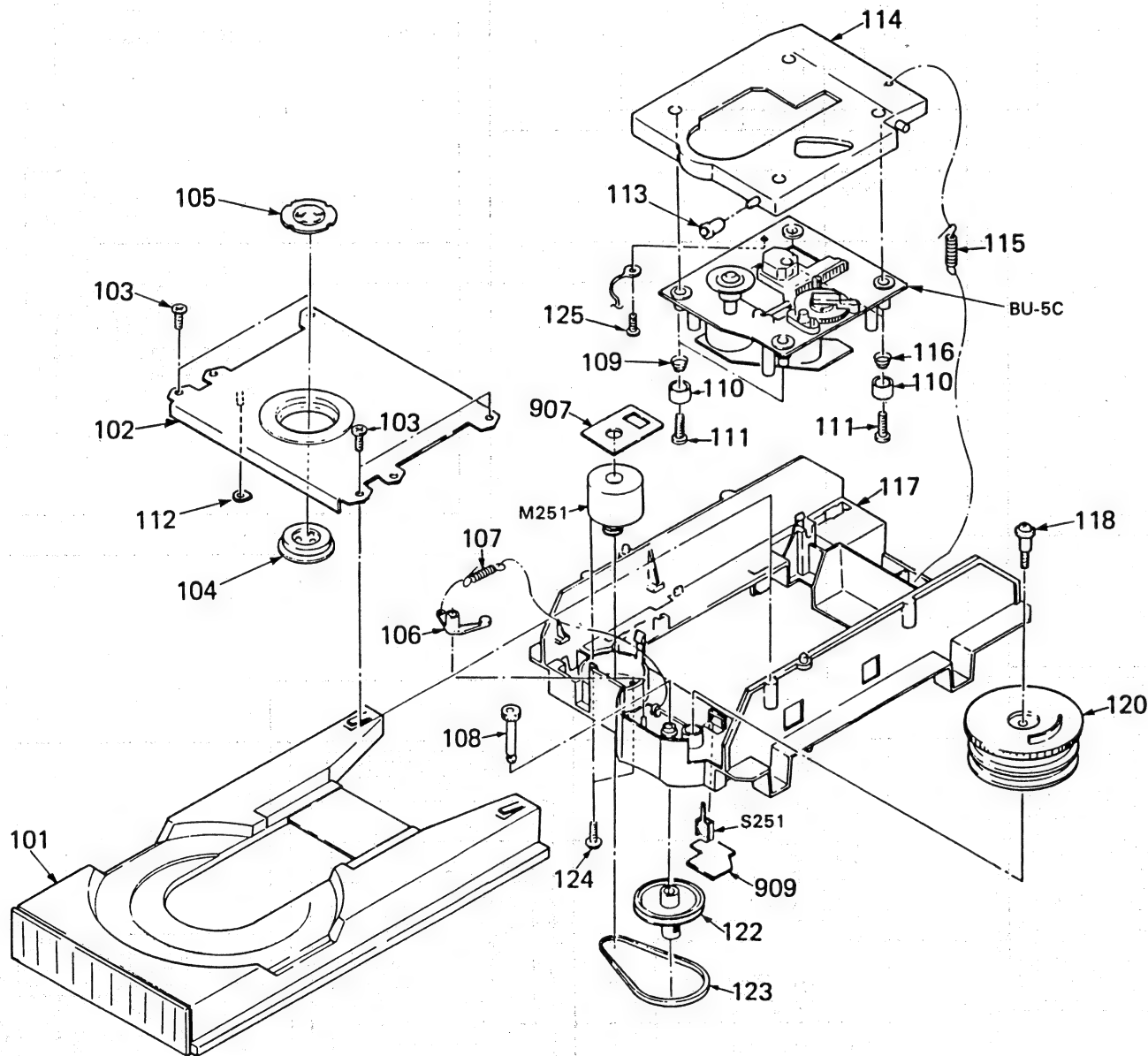
| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-----|---------------|---------------------------------|---------|------|---------------------|--------------------------------|---------|
| 1 | X-4922-915-1 | PANEL ASSY, FRONT | | 21 | 4-922-531-01 | KNOB (A TYPE), LOV | |
| 2 | 7-682-547-04 | SCREW +BVT 3X6 (S) | | 22 | *4-922-987-01 | BRACKET (HP) | |
| 3 | X-4922-916-1 | BUTTON (P) ASSY | | 23 | *4-927-311-01 | COVER (REMOTE CONTROL) | |
| 4 | 4-922-986-01 | BUTTON (MC) | | 25 | *4-885-838-00 | LABEL, CLASS 1 | |
| 5 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S | | 26 | 7-685-647-79 | SCREW +BVT 3X10 TYPE2 N-S | |
| 6 | 4-922-903-01 | BUTTON (PW) | | 27 | *4-922-988-01 | COVER | |
| 7 | *4-921-903-51 | CHASSIS | | 28 | 4-818-403-21 | RIVET, NYLON | |
| 8 | X-4922-001-1 | FOOT ASSY | | 29 | 7-682-547-09 | SCREW +BVT 3X6 (S) | |
| 9 | 2-383-566-00 | SCREW | | 30 | 4-922-939-01 | (UK)...CUSHION | |
| 10 | *4-922-911-01 | CHASSIS (R) | | 901 | *1-628-611-11 | PC BOARD, POWER SWITCH | |
| 11 | 4-922-990-11 | (AEP,UK)...PANEL (LOADING) | | 902 | *1-628-610-11 | PC BOARD, KEY BOARD | |
| 12 | 4-919-376-02 | CASE | | 903 | *1-628-609-11 | PC BOARD, DISPLAY | |
| 13 | 3-704-366-01 | SCREW (CASE) (MX8) | | 904 | *A-4651-232-A | (AEP,UK)...MOUNTED PCB, MAIN | |
| 14 | *4-922-981-41 | (AEP)...PANEL, BACK | | 905 | *A-4651-233-A | (E)...MOUNTED PCB, MAIN | |
| 15 | *3-703-244-00 | (AEP,UK)...BUSHING (2104), CORD | | 906 | *1-551-188-XX | (E)...CORD, POWER | |
| 16 | 4-921-906-01 | FELT | | 907 | *1-555-795-00 | (AEP)...CORD, POWER, EULO PLUG | |
| 17 | 4-921-918-11 | PLATE, ORNAMENTAL | | 908 | *1-556-035-00 | (UK)...CORD, POWER | |
| 18 | 4-922-991-11 | BUTTON (FD) | | 909 | *1-628-612-11 | PC BOARD, HEADPHONE | |
| 20 | 7-682-548-04 | SCREW +BVT 3X8 (S) | | 910 | *1-526-565-00 | (E)...AC PLUG ADAPTOR | |
| | | | | 911 | FLD601 1-519-475-11 | INDICATOR TUBE, FLUORESCENT | |
| | | | | T901 | *1-449-025-11 | (AEP,UK)...TRANSFORMER, POWER | |
| | | | | T902 | *1-449-026-11 | (E)...TRANSFORMER, POWER | |

| No. | Part No. |
|-----|---------------|
| 101 | *4-922-515-01 |
| 102 | *4-929-066-01 |
| 103 | 7-685-546-11 |
| 104 | A-4665-024-A |
| 105 | *4-918-679-04 |
| 106 | 4-917-519-01 |
| 107 | 4-917-514-01 |
| 108 | 4-922-508-01 |
| 109 | 4-917-541-01 |
| 110 | 4-917-508-01 |
| 111 | 7-685-535-11 |
| 112 | *4-922-529-01 |
| 113 | 4-917-515-01 |
| 114 | *4-922-514-01 |



(2) MD Section (CDM9-5)

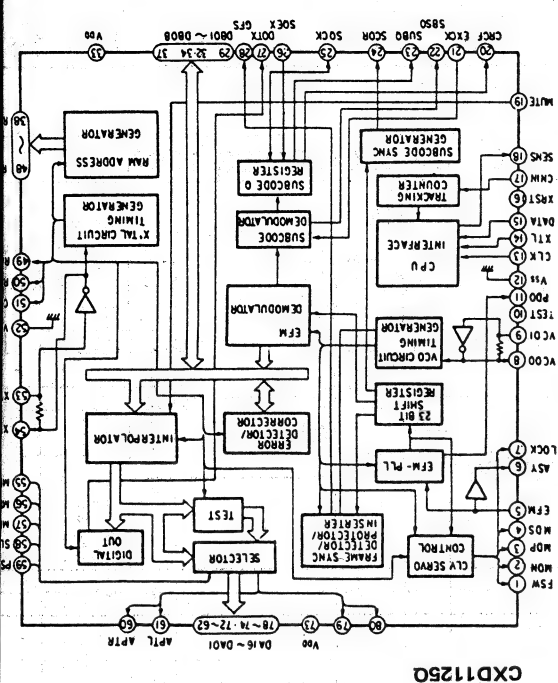
(3) OPTICAL PICK-UP BLOCK (BU-5C)



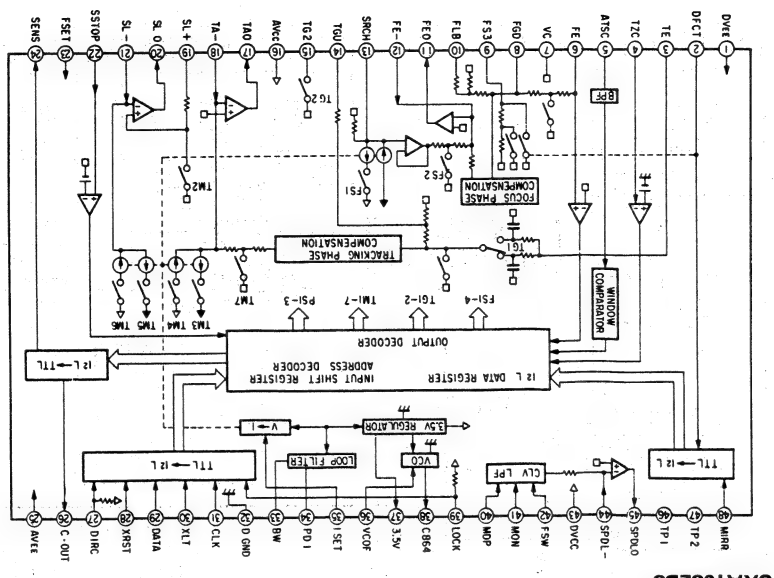
| No. | Part No. | Description |
|-----|---------------|-----------------------------|
| 101 | *4-922-515-01 | TABLE, DISK |
| 102 | *4-929-066-01 | REINFORCEMENT (MG) |
| 103 | 7-685-546-11 | SCREW +BTP 3X8 TYPE2 N-S |
| 104 | A-4665-024-A | MAGNET ASSY |
| 105 | *4-918-679-04 | PULLEY, PRESS |
| 106 | 4-917-519-01 | LEVER, SET |
| 107 | 4-917-514-01 | SPRING, TENSION |
| 108 | 4-922-508-01 | GEAR (DRIVING) |
| 109 | 4-917-541-01 | SPRING (B) |
| 110 | 4-917-508-01 | HOLDER, SP |
| 111 | 7-685-535-11 | SCREW +BTP 2.6X10 TYPE2 N-S |
| 112 | *4-922-529-01 | DAMPER |
| 113 | 4-917-515-01 | ROLLER |
| 114 | *4-922-514-01 | BRACKET (BU-5) |

| No. | Part No. | Description |
|------|---------------|----------------------|
| 115 | 4-917-526-01 | SPRING, TENSION |
| 116 | 4-917-507-01 | SPRING (H) |
| 117 | *4-922-516-01 | CHASSIS (MD) |
| 118 | 7-685-152-19 | SCREW, STEP |
| 120 | 4-922-511-01 | GEAR (LOADING) |
| 121 | 4-922-512-01 | PULLEY |
| 123 | 4-917-522-02 | BELT |
| 124 | 7-621-775-20 | SCREW +B 2.6X5 |
| 125 | 7-621-770-67 | SCREW +BVT 2.6X6 (S) |
| 907 | *1-626-838-11 | PC BOARD, L.MOTOR |
| 909 | *1-626-837-11 | PC BOARD, IN/OUT SW |
| M251 | A-4608-346-A | MOTOR ASSY, L |
| S251 | 1-571-300-11 | SWITCH, ROTARY |

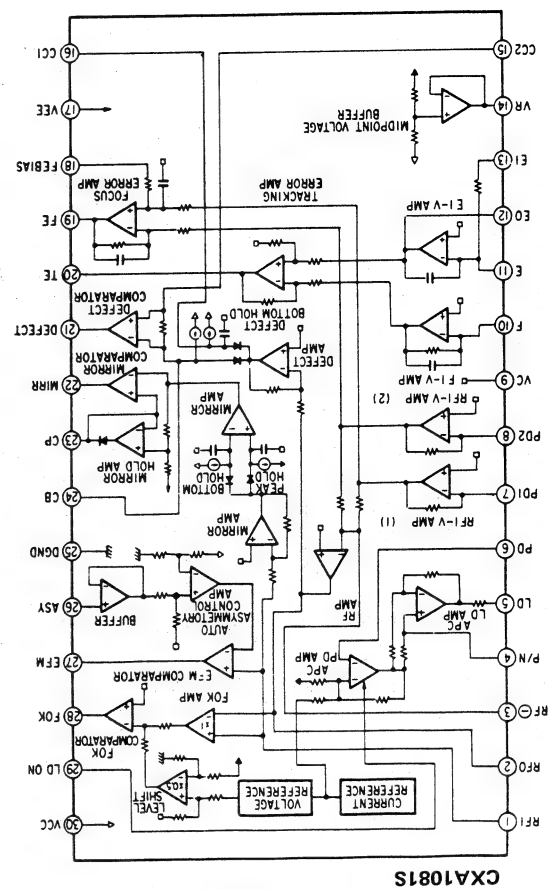
| No. | Part No. | Description |
|-----|--------------|--------------------|
| 151 | 4-917-565-01 | SHAFT, SLED |
| 152 | 4-917-562-01 | INSULATOR |
| 153 | 7-621-255-15 | SCREW +P 2X3 |
| 154 | 4-917-567-01 | GEAR (M) |
| 155 | 4-917-564-01 | GEAR (P), FLATNESS |



CXD11250



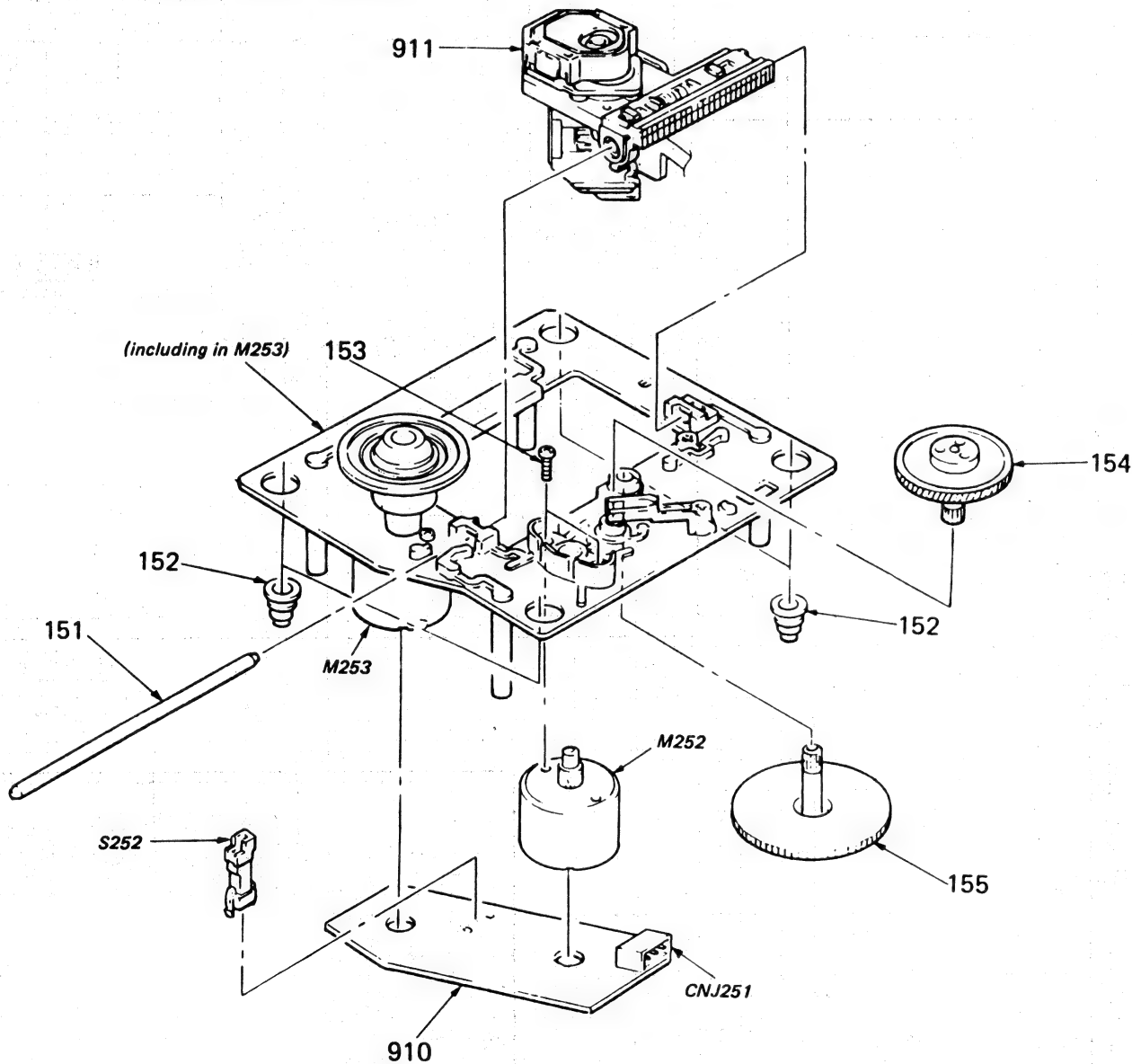
CXA1082BS



CXA1081S

4. IC BLOCK DIAGRAMS

(3) OPTICAL PICK-UP BLOCK (BU-5C)



NOTE:

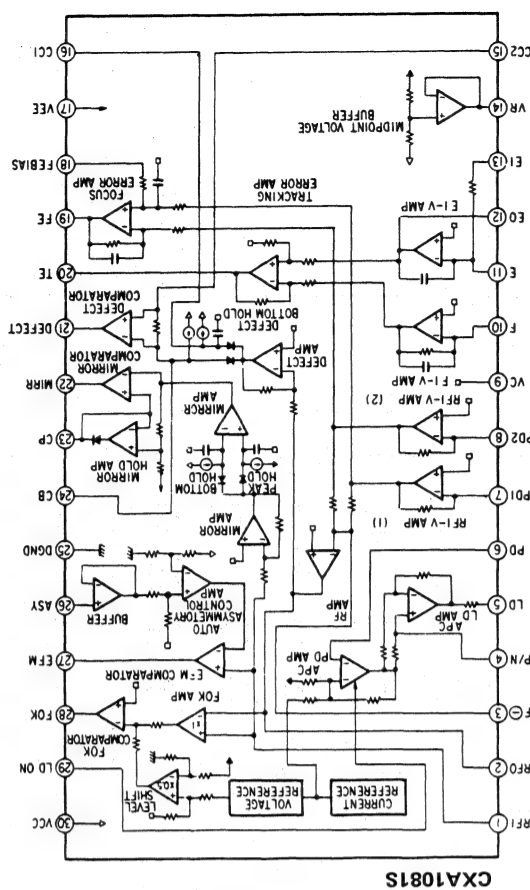
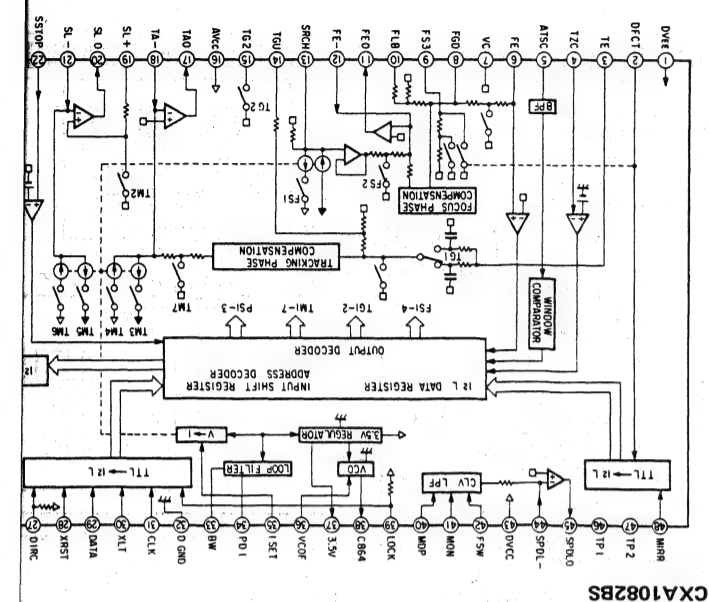
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

| Ref.No. | Part No. | Description |
|---------|--|---------------------------|
| 901 | *1-628-611-11 | PC BOARD, POWER SWITCH |
| 902 | *1-628-610-11 | PC BOARD, KEY BOARD |
| 903 | *1-628-609-11 | PC BOARD, DISPLAY |
| 904 | *A-4651-232-A (AEP,UK)...MOUNTED PCB, MAIN *A-4651-233-A (E).....MOUNTED PCB, MAIN | |
| 905 | *1-535-476-11 | TERMINAL |
| 906 | Δ.1-551-188-XX (E).....CORD, POWER Δ.1-555-795-00 (AEP)...CORD, POWER, EULO PLUG Δ.1-556-035-00 (UK)...CORD, POWER | |
| 907 | *1-626-838-11 | PC BOARD, L.MOTOR |
| 908 | *1-628-612-11 | PC BOARD, HEADPHONE |
| 909 | *1-626-837-11 | PC BOARD, IN/OUT SW |
| 910 | Δ.1-624-322-11 | PC BOARD, SL/SP MOTOR |
| 911 | Δ.8-848-062-01 | DEVICE, OPTICS (KSS-150A) |
| 912 | Δ.1-526-565-01 | (E)...AC PLUG ADAPTOR |
| C001 | 1-126-017-11 | ELECT 6800MF 20% |
| C002 | 1-124-887-00 | ELECT 3300MF 20% |
| C003 | 1-124-927-11 | ELECT 4.7MF 20% |
| C004 | 1-124-927-11 | ELECT 4.7MF 20% |
| C005 | 1-123-875-11 | ELECT 10MF 20% |
| C006 | 1-164-159-11 | CERAMIC 0.1MF |
| C007 | 1-124-472-11 | ELECT 470MF 20% |
| C008 | 1-124-472-11 | ELECT 470MF 20% |
| C009 | 1-124-572-11 | ELECT 100MF 20% |
| C010 | 1-124-122-11 | ELECT 100MF 20% |
| C011 | 1-161-375-00 | CERAMIC 0.0022MF 30% |
| C103 | 1-124-477-11 | ELECT 47MF 20% |
| C104 | 1-162-294-31 | CERAMIC 0.001MF 10% |
| C105 | 1-162-199-31 | CERAMIC 10PF 5% |
| C106 | 1-162-199-31 | CERAMIC 10PF 5% |
| C107 | 1-136-173-00 | FILM 0.47MF 5% |
| C108 | 1-161-375-00 | CERAMIC 0.0022MF 30% |
| C109 | 1-136-153-00 | FILM 0.01MF 5% |
| C110 | 1-136-153-00 | FILM 0.01MF 5% |
| C111 | 1-126-101-11 | ELECT 100MF 20% |
| C112 | 1-126-233-11 | ELECT 22MF 20% |
| C113 | 1-136-159-00 | FILM 0.033MF 5% |
| C114 | 1-161-377-00 | CERAMIC 0.0047MF 30% |
| C201 | 1-136-165-00 | FILM 0.1MF 5% |
| C202 | 1-136-159-00 | FILM 0.033MF 5% |
| C203 | 1-123-382-00 | ELECT 3.3MF 20% |
| C204 | 1-136-165-00 | FILM 0.1MF 5% |
| C205 | 1-161-379-00 | CERAMIC 0.01MF 20% |
| C206 | 1-161-377-00 | CERAMIC 0.0047MF 30% |
| C207 | 1-124-927-11 | ELECT 4.7MF 20% |

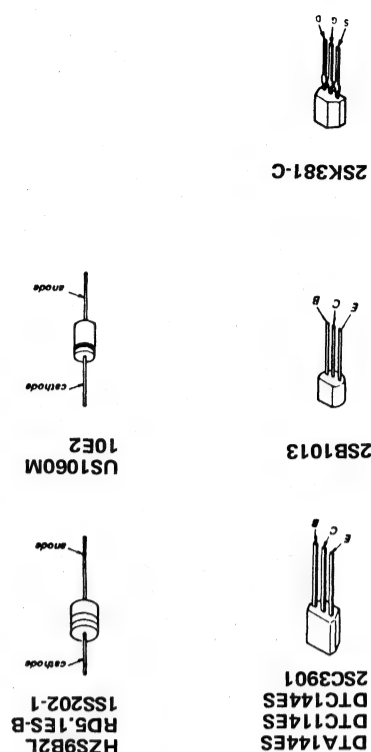
| No. | Part No. | Description |
|-----|--------------|--------------------|
| 151 | 4-917-565-01 | SHAFT, SLED |
| 152 | 4-917-562-01 | INSULATOR |
| 153 | 7-621-255-15 | SCREW +P 2X3 |
| 154 | 4-917-567-01 | GEAR (M) |
| 155 | 4-917-564-01 | GEAR (P), FLATNESS |

| No. | Part No. | Description |
|--------|----------------|--------------------------------|
| 910 | *1-624-322-11 | PC BOARD, SL/SP MOTOR |
| 911 | Δ.8-848-062-01 | DEVICE, OPTICS (KSS-150A) |
| CNJ251 | *1-564-720-21 | PIN, CONNECTOR (SMALL TYPE) 4P |
| M252 | X-4917-504-1 | ASSY, MOTOR (SLED) |
| M253 | X-4917-523-1 | ASSY, MOTOR (SPINDLE) |
| S252 | 1-571-274-11 | SWITCH, LEAF (LIMIT IN) |

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.



4-4. IC BLOCK DIAGRAMS



● Semiconductor Lead Layouts

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

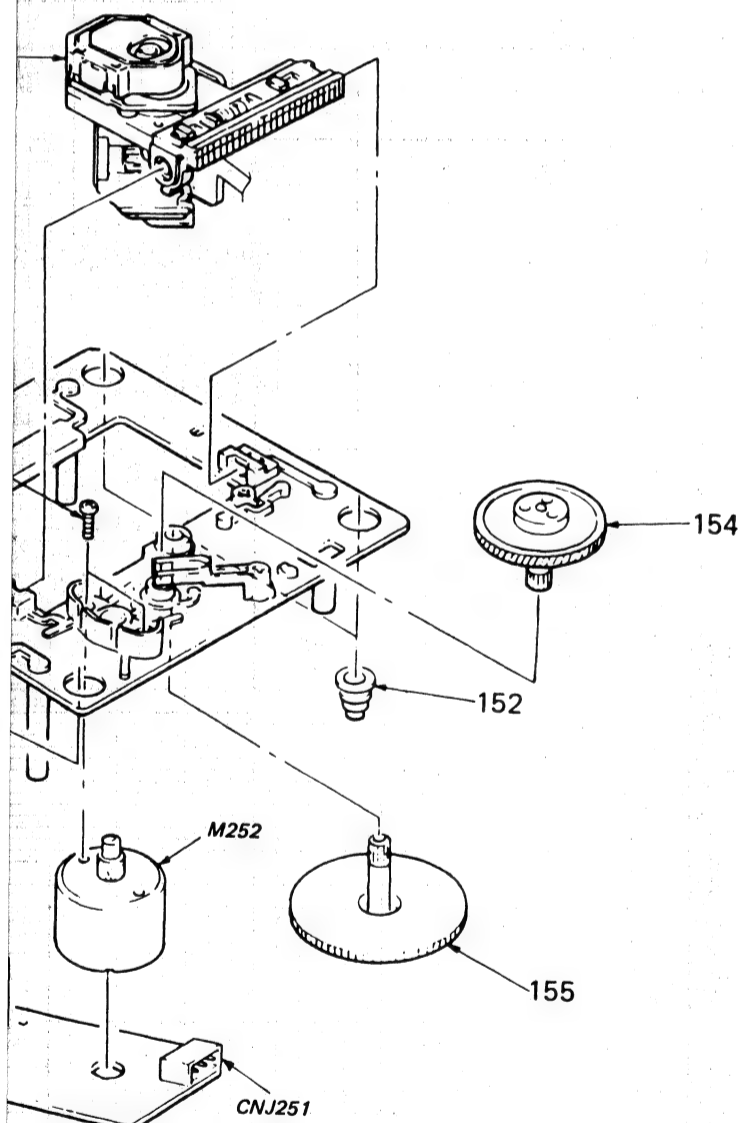
CAPACITORS:
MF: μ F, PF: μ F.

RESISTORS
● All resistors are in ohms.
● F: nonflammable

COILS
● MMH: mH, UH: μ H

SEMICONDUCTORS
In each case, U: μ , for example:
UA: μ A, UPA: μ PA, UPC: μ PC, UPD: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.



| Ref.No. | Part No. | Description |
|---------|---|--|
| 901 | *1-628-611-11 | PC BOARD, POWER SWITCH |
| 902 | *1-628-610-11 | PC BOARD, KEY BOARD |
| 903 | *1-628-609-11 | PC BOARD, DISPLAY |
| 904 | *A-4651-232-A *A-4651-233-A | (AEP,UK)...MOUNTED PCB, MAIN (E).....MOUNTED PCB, MAIN |
| 905 | *1-535-476-11 | TERMINAL |
| 906 | Δ 1-551-188-XX Δ 1-555-795-00 Δ 1-556-035-00 | (E).....CORD, POWER (AEP)...CORD, POWER, EULO PLUG (UK)....CORD, POWER |
| 907 | *1-626-838-11 | PC BOARD, L.MOTOR |
| 908 | *1-628-612-11 | PC BOARD, HEADPHONE |
| 909 | *1-626-837-11 | PC BOARD, IN/OUT SW |
| 910 | Δ 1-624-322-11 | PC BOARD, SL/SP MOTOR |
| 911 | Δ 8-848-062-01 | DEVICE, OPTICS (KSS-150A) |
| 912 | Δ 1-526-565-00 | (E)...AC PLUG ADAPTOR |
| C001 | 1-126-017-11 | ELECT 6800MF 20% 16V |
| C002 | 1-124-887-00 | ELECT 3300MF 20% 16V |
| C003 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C004 | 1-124-927-11 | ELECT 4.7MF 20% 50V |
| C005 | 1-123-875-11 | ELECT 10MF 20% 50V |
| C006 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C007 | 1-124-472-11 | ELECT 470MF 20% 10V |
| C008 | 1-124-472-11 | ELECT 470MF 20% 10V |
| C009 | 1-124-572-11 | ELECT 100MF 20% 63V |
| C010 | 1-124-122-11 | ELECT 100MF 20% 50V |
| C011 | 1-161-375-00 | CERAMIC 0.0022MF 30% 16V |
| C013 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C104 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C105 | 1-162-199-31 | CERAMIC 10PF 5% 50V |
| C106 | 1-162-199-31 | CERAMIC 10PF 5% 50V |
| C107 | 1-136-173-00 | FILM 0.47MF 5% 50V |
| C108 | 1-161-375-00 | CERAMIC 0.0022MF 30% 16V |
| C109 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C110 | 1-136-153-00 | FILM 0.01MF 5% 50V |
| C111 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C112 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C113 | 1-136-159-00 | FILM 0.033MF 5% 50V |
| C114 | 1-161-377-00 | CERAMIC 0.0047MF 30% 16V |
| C201 | 1-136-165-00 | FILM 0.1MF 5% 50V |
| C202 | 1-136-159-00 | FILM 0.033MF 5% 50V |
| C203 | 1-123-382-00 | ELECT 3.3MF 20% 50V |
| C204 | 1-136-165-00 | FILM 0.1MF 5% 50V |
| C205 | 1-161-379-00 | CERAMIC 0.01MF 20% 16V |
| C206 | 1-161-377-00 | CERAMIC 0.0047MF 30% 16V |
| C207 | 1-124-927-11 | ELECT 4.7MF 20% 50V |

| Ref.No. | Part No. | Description |
|---------|--------------|--------------------------|
| C208 | 1-124-477-11 | ELECT 47MF 20% 16V |
| C209 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C210 | 1-162-282-31 | CERAMIC 100PF 10% 50V |
| C211 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C212 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C213 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C214 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C215 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C216 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C217 | 1-161-375-00 | CERAMIC 0.0022MF 30% 16V |
| C218 | 1-162-291-31 | CERAMIC 560PF 10% 50V |
| C219 | 1-123-875-11 | ELECT 10MF 20% 50V |
| C220 | 1-136-165-00 | FILM 0.1MF 5% 50V |
| C225 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C226 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C229 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C230 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C251 | 1-136-157-00 | FILM 0.022MF 5% 50V |
| C252 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C253 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C301 | 1-124-902-00 | ELECT 0.47MF 20% 50V |
| C302 | 1-136-159-00 | FILM 0.033MF 5% 50V |
| C303 | 1-161-379-00 | CERAMIC 0.01MF 20% 16V |
| C304 | 1-124-902-00 | ELECT 0.47MF 20% 50V |
| C305 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C306 | 1-124-499-11 | ELECT 1MF 20% 50V |
| C307 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C308 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C310 | 1-162-204-31 | CERAMIC 16PF 5% 50V |
| C311 | 1-162-203-31 | CERAMIC 15PF 5% 50V |
| C312 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C313 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C314 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C315 | 1-136-173-00 | FILM 0.47MF 5% 50V |
| C320 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C330 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C401 | 1-130-481-00 | MYLAR 0.0068MF 5% 50V |
| C402 | 1-130-481-00 | MYLAR 0.0068MF 5% 50V |
| C403 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C404 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C405 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C406 | 1-126-233-11 | ELECT 22MF 20% 25V |
| C407 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C408 | 1-130-475-00 | MYLAR 0.0022MF 5% 50V |
| C411 | 1-126-103-11 | ELECT 470MF 20% 16V |
| C412 | 1-126-103-11 | ELECT 470MF 20% 16V |

| Remarks | No. | Part No. | Description | Remarks |
|---------|--------|-----------------------|--------------------------------|---------|
| | 910 | *1-624-322-11 | PC BOARD, SL/SP MOTOR | |
| | 911 | Δ 8-848-062-01 | DEVICE, OPTICS (KSS-150A) | |
| | CNJ251 | *1-564-720-21 | PIN, CONNECTOR (SMALL TYPE) 4P | |
| | M252 | X-4917-504-1 | ASSY, MOTOR (SLED) | |
| | M253 | X-4917-523-1 | ASSY, MOTOR (SPINDLE) | |
| | S252 | 1-571-274-11 | SWITCH, LEAF (LIMIT IN) | |

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|---------------|--------------------------------|
| C415 | 1-162-294-31 | CERAMIC 0.001MF 10% 50V |
| C501 | 1-124-234-00 | ELECT 22MF 20% 16V |
| C502 | 1-124-234-00 | ELECT 22MF 20% 16V |
| C503 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C504 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C505 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C601 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C602 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C603 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C604 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C605 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| C606 | 1-164-159-11 | CERAMIC 0.1MF 50V |
| C607 | 1-162-290-31 | CERAMIC 470PF 10% 50V |
| CN256 | *1-564-495-11 | PIN, CONNECTOR 2P |
| CN260 | *1-564-718-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CNJ604 | 1-535-743-11 | JUMPER, FILM (WITH TERMINAL) |
| CNP001 | *1-564-340-00 | PIN, CONNECTOR 6P |
| CNP101 | *1-564-710-11 | PIN, CONNECTOR (SMALL TYPE) 8P |
| CNP102 | *1-564-706-31 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CNP103 | *1-564-706-31 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CNP201 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CNP202 | *1-564-339-61 | PIN, CONNECTOR 5P |
| CNP204 | 1-566-908-11 | SOCKET, CONNECTOR 32P |
| CNP401 | *1-564-708-11 | PIN, CONNECTOR (SMALL TYPE) 6P |
| CNP501 | 1-564-722-11 | PIN, CONNECTOR (SMALL TYPE) 6P |
| D001 | 8-719-200-02 | DIODE 10E2 |
| D002 | 8-719-200-02 | DIODE 10E2 |
| D003 | 8-719-200-02 | DIODE 10E2 |
| D004 | 8-719-200-02 | DIODE 10E2 |
| D005 | 8-719-200-02 | DIODE 10E2 |
| D006 | 8-719-109-89 | DIODE RD5.1ES-B2 |
| D401 | 8-719-107-94 | DIODE 1SS202-1 |
| D601 | 8-719-000-26 | DIODE US1060M |
| D602 | 8-719-000-26 | DIODE US1060M |
| D603 | 8-719-000-26 | DIODE US1060M |
| D604 | 8-719-000-26 | DIODE US1060M |
| D605 | 8-719-000-26 | DIODE US1060M |
| D606 | 8-719-000-26 | DIODE US1060M |
| D607 | 8-719-000-26 | DIODE US1060M |
| D608 | 8-719-933-57 | DIODE HZS9B2L |
| FLD601 | 1-519-475-11 | INDICATOR TUBE, FLUORESCENT |
| IC001 | 8-759-631-40 | IC M5294P |
| IC002 | 8-759-605-43 | IC M5231TL |
| IC101 | 8-752-034-00 | IC CXA1081S |
| IC201 | 8-752-032-30 | IC CXA1082BS |

| Ref.No. | Part No. | Description |
|---------|---------------|----------------------------------|
| IC202 | 8-752-035-28 | IC CXA-1291P |
| IC203 | 8-752-035-28 | IC CXA-1291P |
| IC301 | 8-752-328-62 | IC CXD1125Q |
| IC302 | 8-752-323-64 | IC CXK5816M-12L |
| IC303 | 8-752-328-72 | IC CXD2550P |
| IC304 | 8-759-977-71 | IC GPIF31T (OPTICAL DIGITAL OUT) |
| IC305 | 8-759-605-44 | IC M74HC6004P |
| IC401 | 8-759-937-95 | IC PCM56P-S |
| IC402 | 8-759-937-95 | IC PCM56P-S |
| IC403 | 8-759-945-58 | IC RC4558P |
| IC501 | 8-759-745-56 | IC NJM4556D |
| IC601 | 8-759-980-34 | IC MSC6458-36SS |
| IC602 | 8-749-920-03 | IC GPIU52 |
| J401 | 1-566-921-11 | JACK, PIN 2P (LINE OUT L/R) |
| J501 | 1-507-796-71 | JACK, LARGE TYPE (HEADPHONES) |
| L301 | *1-410-858-11 | INDUCTOR 0UH |
| M251 | A-4608-346-A | MOTOR ASSY, L |
| M252 | X-4917-504-1 | MOTOR ASSY (SLED) |
| M253 | X-4917-523-1 | MOTOR ASSY (SPINDLE) |
| Q001 | 8-729-600-94 | TRANSISTOR 2SK381-C |
| Q101 | 8-729-801-43 | TRANSISTOR 2SB1013 |
| Q201 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q202 | 8-729-900-89 | TRANSISTOR DTC144ES |
| Q301 | 8-729-900-89 | TRANSISTOR DTC144ES |
| Q401 | 8-729-806-26 | TRANSISTOR 2SC3901 |
| Q402 | 8-729-806-26 | TRANSISTOR 2SC3901 |
| Q403 | 8-729-900-65 | TRANSISTOR DTA144ES |
| Q404 | 8-729-900-89 | TRANSISTOR DTC144ES |
| Q407 | 8-729-806-27 | TRANSISTOR 2SC3901 |
| Q408 | 8-729-806-26 | TRANSISTOR 2SC3901 |
| Q601 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q602 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q603 | 8-729-900-80 | TRANSISTOR DTC114ES |
| R001 | 1-249-439-11 | CARBON 68K 5% 1/4W |
| R002 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R003 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R004 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R101 | 1-247-864-11 | CARBON 24K 5% 1/4W |
| R104 | 1-249-397-11 | CARBON 22 5% 1/4W |
| R105 | 1-247-806-11 | CARBON 91 5% 1/4W |
| R106 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R108 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R109 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R110 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R111 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |

| Ref.No. | Part No. | Description |
|---------|--------------|---------------------|
| R112 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R201 | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R202 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R203 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R204 | 1-249-440-11 | CARBON 82K 5% 1/4W |
| R205 | 1-247-889-00 | CARBON 270K 5% 1/4W |
| R206 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R207 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R208 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R209 | 1-247-896-11 | CARBON 510K 5% 1/4W |
| R210 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R211 | 1-249-414-11 | CARBON 560 5% 1/4W |
| R212 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R213 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R214 | 1-215-434-00 | METAL 3.6K 1% 1/6W |
| R215 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R216 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R217 | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R218 | 1-249-427-11 | CARBON 6.8K 5% 1/4W |
| R219 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R220 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R221 | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R222 | 1-247-883-00 | CARBON 150K 5% 1/4W |
| R223 | 1-247-882-11 | CARBON 130K 5% 1/4W |
| R224 | 1-247-883-00 | CARBON 150K 5% 1/4W |
| R225 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R230 | 1-249-433-11 | CARBON 10 5% 1/4W |
| R231 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R236 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R237 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R238 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R239 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R240 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R301 | 1-247-903-00 | CARBON 1M 5% 1/4W |
| R302 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R303 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R304 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R305 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R306 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R307 | 1-215-469-00 | METAL 100K 1% 1/6W |
| R308 | 1-215-469-00 | METAL 100K 1% 1/6W |
| R310 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R311 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R312 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R314 | 1-249-411-11 | CARBON 330 5% 1/4W |

| Ref.No. | Part No. | Description |
|---------|--------------|-----------------------|
| R315 | 1-249-411-11 | CARBON 330 5% 1/4W |
| R316 | 1-249-411-11 | CARBON 330 5% 1/4W |
| R318 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R319 | 1-249-411-11 | CARBON 330 5% 1/4W |
| R320 | 1-249-411-11 | CARBON 330 5% 1/4W |
| R401 | 1-249-416-11 | CARBON 820 5% 1/4W |
| R402 | 1-249-416-11 | CARBON 820 5% 1/4W |
| R403 | 1-249-416-11 | CARBON 820 5% 1/4W |
| R404 | 1-249-416-11 | CARBON 820 5% 1/4W |
| R405 | 1-247-891-00 | CARBON 330K 5% 1/4W |
| R406 | 1-247-891-00 | CARBON 330K 5% 1/4W |
| R407 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R408 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R409 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R410 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R411 | 1-249-414-11 | CARBON 560 5% 1/4W |
| R412 | 1-249-414-11 | CARBON 560 5% 1/4W |
| R413 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R414 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R415 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R416 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R417 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R501 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R502 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R503 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R504 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R505 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R506 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R507 | 1-249-402-11 | CARBON 56 5% 1/4W |
| R508 | 1-249-402-11 | CARBON 56 5% 1/4W |
| R601 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R602 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R603 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R604 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R605 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R606 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R607 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R611 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R612 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R613 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R614 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| RV101 | 1-228-995-00 | RES. ADJ, CARBON 22K |
| RV102 | 1-228-993-00 | RES. ADJ, CARBON 4.7K |
| RV103 | 1-228-995-00 | RES. ADJ, CARBON 22K |
| RV104 | 1-228-995-00 | RES. ADJ, CARBON 22K |

| Ref.No. | Part No. | Description |
|---------|----------------|---|
| RV201 | 1-228-990-00 | RES. ADJ. METAL GLAZE 1K |
| RV201 | 1-238-394-11 | RES. ADJ. METAL GLAZE 1K |
| RV501 | 1-238-403-21 | RES. VAR. CARBON 20K/20K (LEVEL) |
| S001 | △ 1-571-722-11 | (E)...SWITCH, VOLTAGE SELECTOR (VOLTAGE SELECTOR) |
| S251 | 1-571-300-11 | SWITCH, ROTARY |
| S252 | 1-571-274-11 | LEAF SWITCH (LIMIT IN) |
| S601 | 1-554-596-21 | SWITCH, KEY BOARD (17) |
| S602 | 1-554-596-21 | SWITCH, KEY BOARD (18) |
| S603 | 1-554-596-21 | SWITCH, KEY BOARD (19) |
| S604 | 1-554-596-21 | SWITCH, KEY BOARD (20) |
| S605 | 1-554-596-21 | SWITCH, KEY BOARD (16) |
| S606 | 1-554-596-21 | SWITCH, KEY BOARD (11) |
| S607 | 1-554-596-21 | SWITCH, KEY BOARD (12) |
| S608 | 1-554-596-21 | SWITCH, KEY BOARD (13) |
| S609 | 1-554-596-21 | SWITCH, KEY BOARD (14) |
| S610 | 1-554-596-21 | SWITCH, KEY BOARD (15) |
| S611 | 1-554-596-21 | SWITCH, KEY BOARD (>20) |
| S612 | 1-554-596-21 | SWITCH, KEY BOARD (6) |
| S613 | 1-554-596-21 | SWITCH, KEY BOARD (7) |
| S614 | 1-554-596-21 | SWITCH, KEY BOARD (8) |
| S615 | 1-554-596-21 | SWITCH, KEY BOARD (9) |
| S616 | 1-554-596-21 | SWITCH, KEY BOARD (10) |
| S617 | 1-554-596-21 | SWITCH, KEY BOARD (FADER) |
| S618 | 1-554-596-21 | SWITCH, KEY BOARD (1) |
| S619 | 1-554-596-21 | SWITCH, KEY BOARD (2) |
| S620 | 1-554-596-21 | SWITCH, KEY BOARD (3) |
| S621 | 1-554-596-21 | SWITCH, KEY BOARD (4) |
| S622 | 1-554-596-21 | SWITCH, KEY BOARD (5) |
| S623 | 1-554-596-21 | SWITCH, KEY BOARD (◀◀) |
| S624 | 1-554-596-21 | SWITCH, KEY BOARD (▶▶) |
| S625 | 1-554-596-21 | SWITCH, KEY BOARD (EDIT/TIME FADE) |
| S626 | 1-554-596-21 | SWITCH, KEY BOARD (CHECK) |
| S627 | 1-554-596-21 | SWITCH, KEY BOARD (CLEAR) |
| S628 | 1-554-596-21 | SWITCH, KEY BOARD (◀◀) |
| S629 | 1-554-596-21 | SWITCH, KEY BOARD (▶▶) |
| S630 | 1-554-596-21 | SWITCH, KEY BOARD (△ OPEN/CLOSE) |
| S631 | 1-554-596-21 | SWITCH, KEY BOARD (▷) |
| S632 | 1-554-596-21 | SWITCH, KEY BOARD () |
| S633 | 1-554-596-21 | SWITCH, KEY BOARD (■) |
| S634 | 1-554-596-21 | SWITCH, KEY BOARD (REPEAT) |
| S635 | 1-554-596-21 | SWITCH, KEY BOARD (PROGRAM) |
| S636 | 1-554-596-21 | SWITCH, KEY BOARD (SHUFFLE) |
| S637 | 1-554-596-21 | SWITCH, KEY BOARD (CONTINUE/SINGLE) |
| S638 | 1-554-596-21 | SWITCH, KEY BOARD (AUTO SPACE) |
| S639 | 1-554-596-21 | SWITCH, KEY BOARD (TIME) |
| S640 | 1-571-305-11 | SWITCH, PUSH (1 KEY)(POWER) |

| Ref.No. | Part No. | Description |
|------------------------------|---|--------------------------------|
| T901 | △ 1-449-025-11 | (AEP,UK)...TRANSFORMER, POWER |
| T901 | △ 1-449-026-11 | (E).....TRANSFORMER, POWER |
| X301 | 1-567-926-11 | VIBRATOR, CRYSTAL (16.9344MHz) |
| X601 | 1-577-082-11 | VIBRATOR, CERAMIC (4MHz) |
| ACCESSORY & PACKING MATERIAL | | |
| 1-465-051-11 | REMOTE COMMANDER (RM-D270) | |
| 1-558-543-11 | CORD, CONNECTION | |
| 3-786-618-11 | MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE) | |
| 3-786-618-41 | (AEP)....MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN) | |
| *3-795-629-11 | (AEP)....INSTRUCTION CUSHION | |
| *4-922-998-01 | | |
| *4-927-316-11 | INDIVIDUAL CARTON COVER, BATTERY (FOR REMOTE COMMANDER) | |
| 4-928-079-01 | | |
| 7-632-650-75 | SHEET, PROTECTION (500MM) | |

Troubleshooting Guide

| Symptom | Cause | Remedy |
|---|---|--|
| The disc tray does not close. | The disc is not placed correctly. | Place the disc correctly on the disc tray. |
| Play does not start. | Dirty disc. | Clean the disc. |
| | The disc is inserted upside down. | Insert the disc with the printed side up. |
| | ■ is engaged. | Press ■ again to release it. |
| | Moisture condensation. | Leave the player turned on for approximately one hour. |
| Sound is not heard. | Loose connection. | Insert the plug firmly. |
| | Connection is incorrect. | Check the connection. |
| Play does not begin from the first selection. | The player is in the PROGRAM or SHUFFLE mode. | Press CONTINUE. |
| Play begins only by turning on the power. | A disc is in the tray. | — |
| The remote commander does not operate the unit. | The batteries are run down. | Replace both batteries. |
| | The remote commander is not pointed at the remote sensor. | Point the remote commander at the sensor. |
| | There is an obstacle between the remote commander and the unit. | Remove the obstacle. |
| | The remote commander is too far from the unit. | Move closer. |
| Any operation is not possible. | The internal control program may not run. | Turn off the power and turn it on again. |

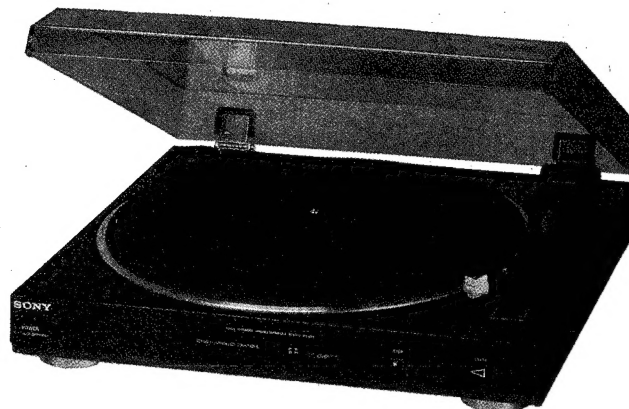
Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

PS-V701/V701P

SERVICE MANUAL

AEP Model
PS-V701

UK Model
PS-V701P



**PS-V701P is the STEREO
TURNTABLE SYSTEM
in LBT-V701CD/V701CDG**

This photo is PS-V701.

SPECIFICATIONS

Turntable

| | |
|-----------------------|--|
| Platter | 30 cm (12 in.) |
| Motor | DC servo motor |
| Drive system | Belt drive |
| Speed | 33 $\frac{1}{3}$ rpm/45 rpm switchable |
| Wow and flutter | 0.15% (WRMS) |
| Signal-to-noise ratio | 65 dB (DIN-B) |
| Automatic system | Return, reject, lead in. |

Tonearm

| | |
|------------------------|------------------------------|
| Type | Dynamically balanced |
| Pivot-to stylus length | 206 mm (7 $\frac{7}{8}$ in.) |
| Overall arm length | 235 mm (9 $\frac{3}{8}$ in.) |

Cartridge

| | |
|--------------------|--------------------|
| Type | Moving magnet type |
| Frequency response | 20 Hz - 20kHz |
| Stylus | ND-155G |

General

| | |
|--------------------|--|
| Dimensions | 355 × 100 × 340 mm (w/h/d) (14 × 4 × 13 $\frac{1}{2}$ inches) |
| Weight | Approx. 2.6 kg (4 lb 14 oz) |
| Power requirements | 220 V AC, 50/60 Hz |
| Power consumption | 2 W |
| Accessory supplied | 45-rpm adaptor (1) |
| Optional accessory | Replacement stylus ND-155G |

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

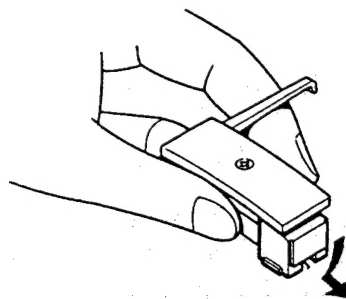
Note for Cartridge

Be careful not to use any cartridge except for specified one (Part No.: 1-549-135-11) as balance weight of pick up arm assy is fixed.

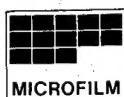
REPLACING THE STYLUS

Replace the stylus after about 400 hours of use because using a worn stylus will damage records. An ND-155G replacement stylus is available at your Sony dealer. Be sure to turn the amplifier off before proceeding with replacement.

- 1 While holding the cartridge, detach the stylus assembly as illustrated.
- 2 Insert the new stylus into the cartridge.



STEREO TURNTABLE SYSTEM
SONY®



SECTION 1 GENERAL

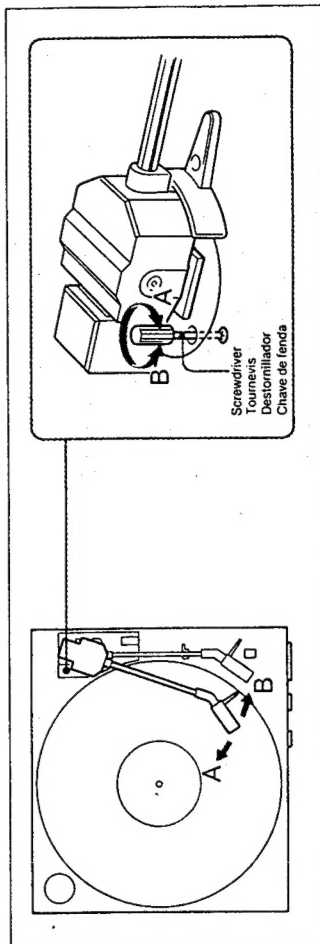
1-2. TONEARM DROP-POINT ADJUSTMENT

The tonearm drop-point during auto play has been factory-adjusted. If necessary, readjust it as follows.

To move the drop-point toward A, turn the adjustment screw clockwise with a screwdriver.

To move the drop-point toward B, turn the adjustment screw counterclockwise with a screwdriver.

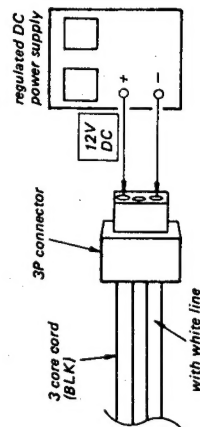
If the tonearm does not return to the arm rest automatically after play
Turn the adjustment screw counterclockwise.



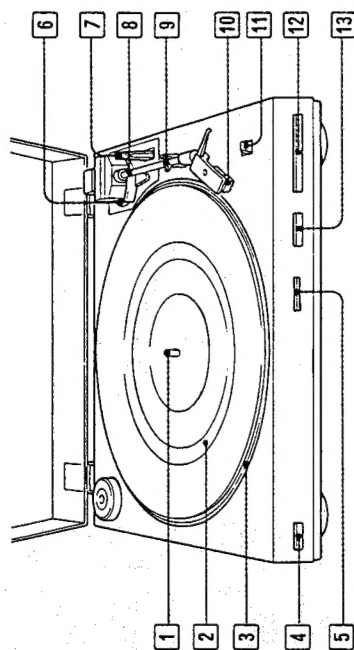
REPAIRING PRECAUTION (PS-V701 only)

[To supply B+ voltage]

The power of this unit is fed from TA-V701. Because of this, connect the regulated DC power supply as illustrated right when this unit alone operates.



1-1. LOCATION AND FUNCTION OF CONTROLS



1 Center spindle

2 Rubber mat

3 Turntable platter

4 POWER switch

5 SPEED select button

Allows selection of 45 rpm or 33 rpm turntable speed.

6 Drop point adjustment hole

7 Cueing lever (▼/▼)

8 Tonearm

9 Arm rest

10 Cartridge

11 SIZE SELECTOR

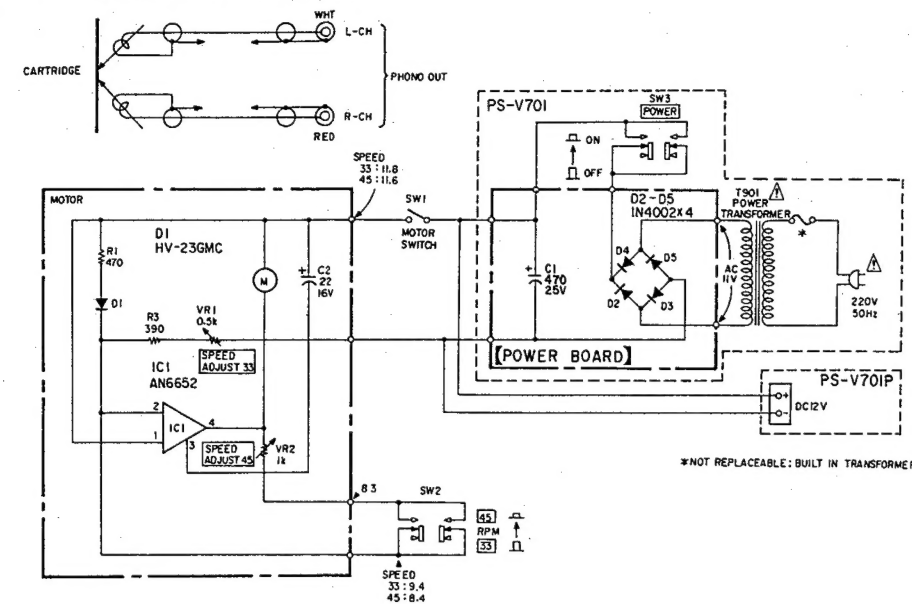
Allows selection of 17 cm (7 inch) or 30 cm (12 inch) records.

12 ◀(start) button

13 ■ (stop) button

SECTION 2
DIAGRAMS

2-1. SCHEMATIC DIAGRAM



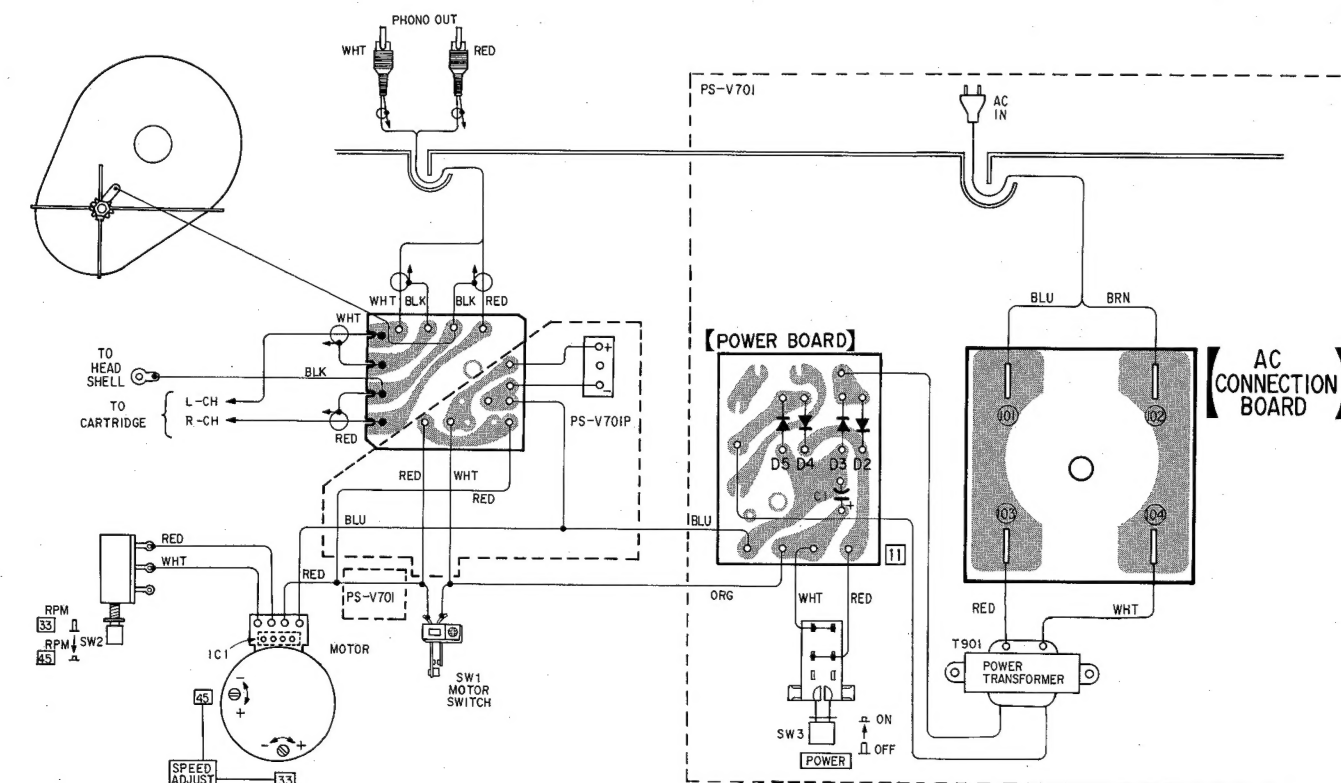
Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Switches:

| Ref. No. | Switch | Position |
|----------|------------------|----------|
| SW1 | MOTOR | OFF |
| SW2 | SPEED | 33 |
| SW3 | POWER | OFF |
| SW4 | VOLTAGE SELECTOR | 120V |

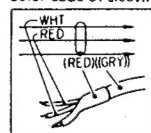
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

2-2. WIRING DIAGRAM



Note:

- Color code of sleeving over the end of the jacket.



○ — : parts extracted from the component side.

SECTION 3
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

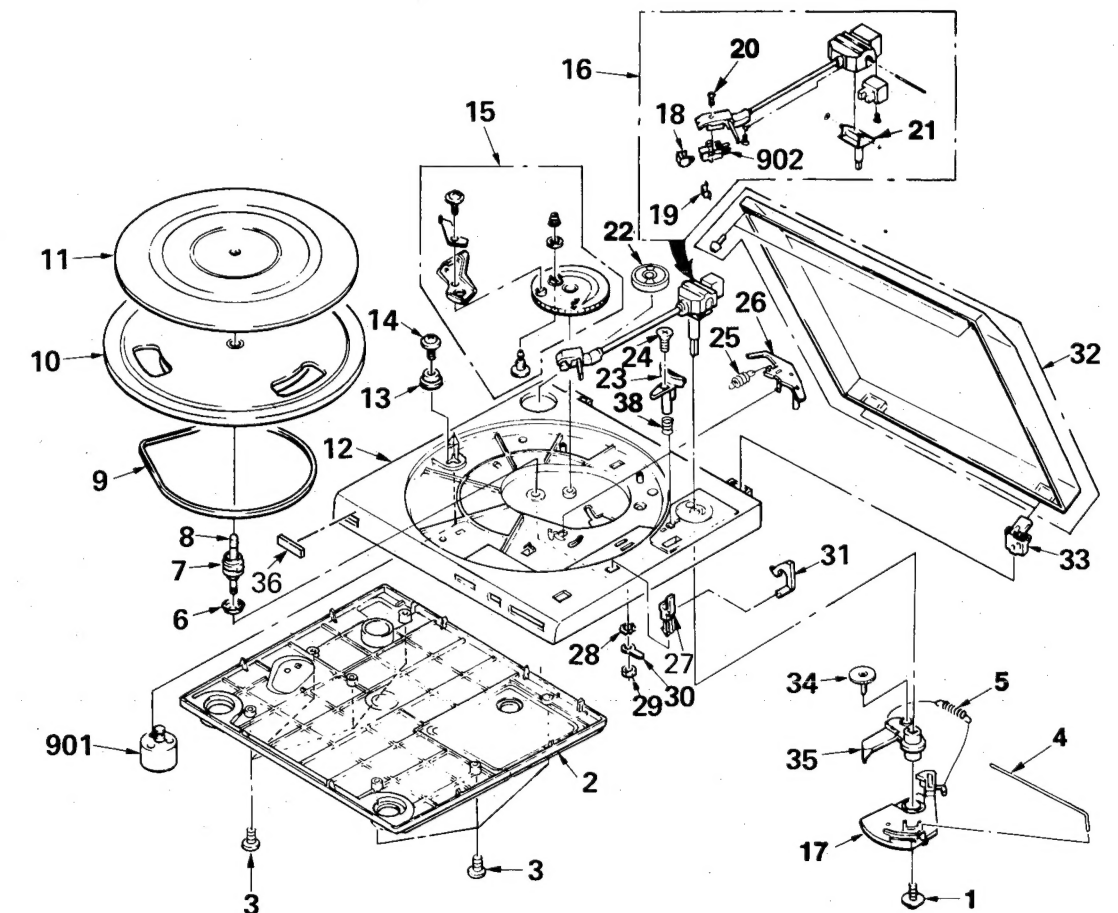
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example: (RED) ... KNOB, BALANCE (WHITE)

↑
Cabinet's Color

↑
Parts Color

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

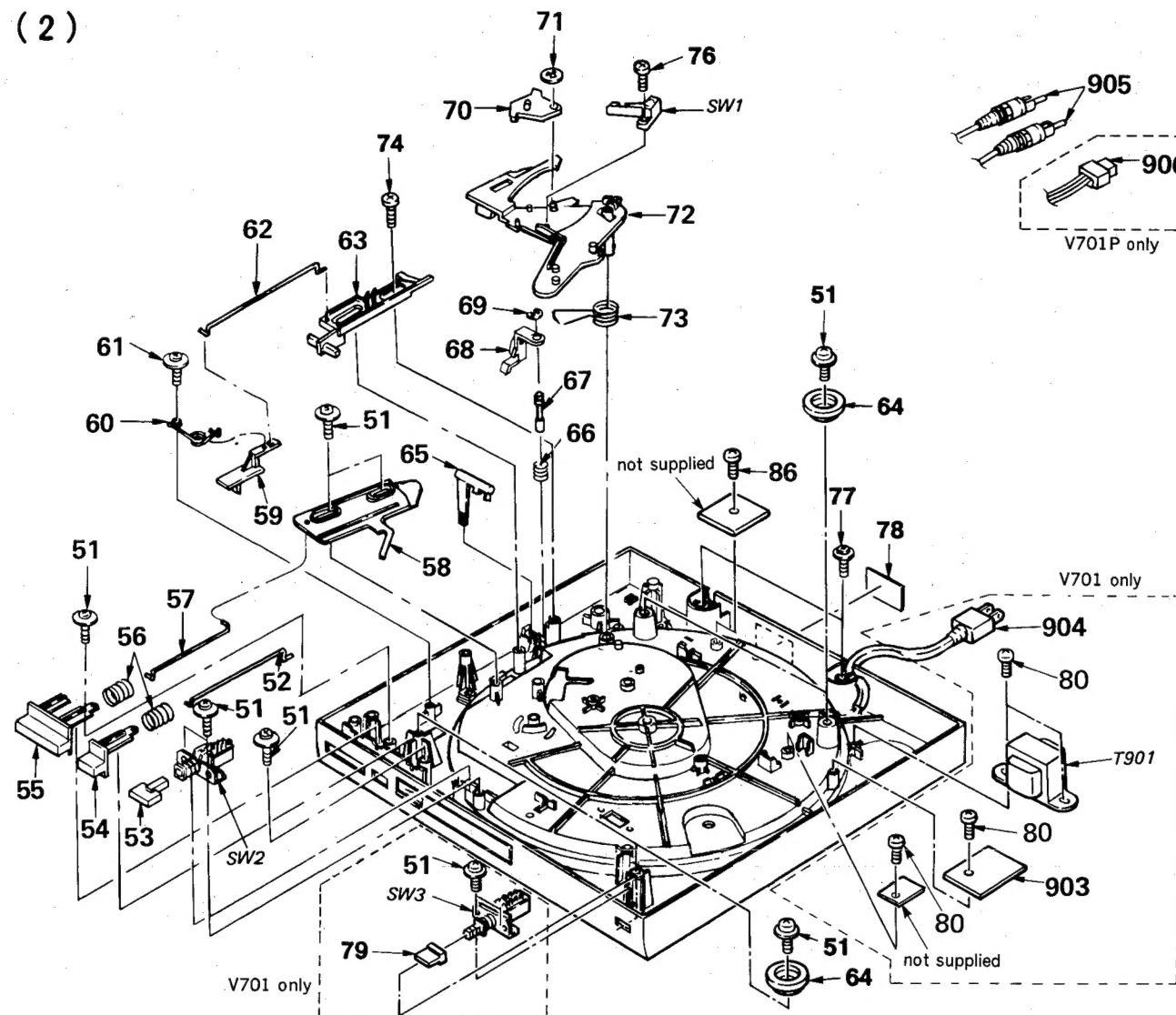
(1)



| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-----|---------------|-----------------------------|---------|-----|--------------|---------------------|---------|
| 1 | 4-896-509-01 | SCREW (7-BID 3012 ZN3A 12D) | | 21 | 4-895-464-01 | P.U. HINGE BRACKET | |
| 2 | *4-896-217-01 | BOARD, BOTTOM | | 22 | 3-701-806-00 | ADAPTOR, 45 | |
| 3 | 7-685-647-79 | SCREW | | 23 | 4-896-258-01 | PLATFORM, LIFT | |
| 4 | *4-896-264-01 | ROD, TRIP | | 24 | 7-621-561-49 | SCREW | |
| 5 | 4-895-460-01 | ADJUST SPRING | | 25 | 4-896-262-01 | SPRING | |
| 6 | 4-896-210-01 | WASHER | | 26 | 4-896-505-01 | LEVER, REJECT | |
| 7 | 4-896-233-01 | GEAR, T/T | | 27 | 4-895-417-01 | P.U. REST | |
| 8 | 4-896-232-01 | SPINDLE | | 28 | 7-623-424-07 | W GEAR 0003 ZN3A | |
| 9 | 4-880-655-01 | BELT | | 29 | 7-684-024-04 | NUT 50 ZN3A | |
| 10 | 4-909-060-01 | TURNTABLE | | 30 | 4-896-508-01 | TERMINAL, GROUND | |
| 11 | 4-895-478-01 | INNER PLATE | | 31 | 4-895-418-01 | P.U. TUBE HOOK | |
| 12 | 4-896-506-01 | (V701)...CABINET | | 32 | 4-895-480-01 | DUST COVER ASSY | |
| | 4-896-511-01 | (V701P)...CABINET | | 33 | 4-895-410-01 | HINGE ASSY | |
| 13 | 4-896-507-01 | GROMMET (A) | | 34 | 4-895-458-01 | ADJUST CAM | |
| 14 | 7-685-646-79 | SCREW | | 35 | 4-896-223-01 | LINK (A), RETURN | |
| 15 | X-4895-409-1 | GEAR ASSY, CAM | | 36 | 4-925-161-21 | EMBLEM (4-A), SONY | |
| 16 | X-4895-410-1 | ARM ASSY | | 38 | 4-896-267-01 | SPRING (A) | |
| 17 | 4-896-224-01 | LINK (B), RETURN | | 901 | 1-541-568-11 | MOTOR | |
| 18 | 1-549-132-11 | BEAM | | 902 | 1-549-135-11 | CARTRIDGE (ND-155G) | |
| 19 | 4-895-474-01 | COVER, BEAM | | | | | |
| 20 | 7-627-553-98 | SCREW | | | | | |

SECTION 4 ELECTRICAL PARTS LIST

(2)



Note: The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

| No. | Part No. | Description | Remarks | No. | Part No. | Description | Remarks |
|-----|---------------|-------------------|---------|------|---------------|---------------------------------------|---------|
| 51 | 7-685-646-79 | SCREW | | 71 | 4-303-605-00 | PUSH NUT DIA.3 | |
| 52 | 4-896-261-01 | WIRE, REJECT | | 72 | 4-896-218-01 | ARM, CONTROL | |
| 53 | 4-896-241-01 | BUTTON, SPEED | | 73 | 4-896-247-01 | SPRING | |
| 54 | 4-896-240-01 | BUTTON, STOP | | 74 | 4-896-510-01 | SCREW (7-BID 304 ZN3A) | |
| 55 | 4-896-242-01 | BUTTON, START | | 76 | 7-685-104-19 | SCREW | |
| 56 | 4-896-255-01 | SPRING | | 77 | 4-896-256-01 | SCREW ASSY | |
| 57 | 4-896-216-01 | WIRE, CONTROL ARM | | 78 | *4-928-260-01 | (V701P).....LABEL, MODEL NUMBER | |
| 58 | 4-896-215-01 | LEVER, CONTROL | | | *4-928-259-01 | (V701:AE1)...LABEL, MODEL NUMBER (AE) | |
| 59 | 4-896-243-01 | KNOB, SPEED | | | *4-928-259-11 | (V701:AE2)...LABEL, MODEL NUMBER (AE) | |
| 60 | 4-896-244-01 | SPRING | | 79 | 4-895-896-01 | (V701)...BUTTON, POWER | |
| 61 | 4-896-245-01 | SCREW | | 80 | 7-685-647-79 | SCREW | |
| 62 | *4-896-213-01 | WIRE, SELECTOR | | 903 | 1-626-640-11 | (V701)...PC BOARD, POWER | |
| 63 | 4-896-214-01 | SELECTOR, SIZE | | 904 | ▲1-555-750-00 | (V701)...CORD, POWER, EULO PLUG | |
| 64 | 4-895-435-01 | FOOT | | 905 | 1-555-116-11 | CORD, CONNECTION | |
| 65 | 4-896-212-01 | LEVER, CUE | | 906 | 1-557-109-21 | (V701P)...CORD, CONNECTION (3 CORE) | |
| 66 | 4-896-251-01 | SPRING (B) | | SW1 | 1-570-666-11 | SWITCH, LEAF | |
| 67 | 4-896-252-01 | SHAFT, ARM LIFT | | SW2 | 1-571-560-11 | SWITCH, PUSH (1 KEY) | |
| 68 | 4-896-253-01 | FORK, LIFT | | SW3 | 1-571-560-11 | (V701)...SWITCH, PUSH (1 KEY) | |
| 69 | 4-896-254-01 | RING (DIA.3), E | | T901 | ▲1-449-291-11 | (V701)...TRANSFORMER, POWER | |
| 70 | 4-896-248-01 | CAM | | | | | |

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
 UA....: μ A..., UPA....: μ PA...,
 UPC....: μ PC, UPD....: μ PD...

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---------|---------------|-------------------------------------|
| 901 | 1-541-568-11 | MOTOR |
| 902 | 1-549-135-11 | CARTRIDGE (MD-155G) |
| 903 | 1-626-640-11 | (V701)...PC BOARD, POWER |
| 904 | ▲1-555-750-00 | (V701)...CORD, POWER, EULO PLUG |
| 905 | 1-555-116-11 | CORD, CONNECTION |
| 906 | 1-557-109-21 | (V701P)...CORD, CONNECTION (3 CORE) |
| C1 | 1-123-336-00 | (V701)...ELECT 470 20% 25V |
| D2 | 8-719-200-02 | (V701)...DIODE 10E2 |
| D3 | 8-719-200-02 | (V701)...DIODE 10E2 |
| D4 | 8-719-200-02 | (V701)...DIODE 10E2 |
| D5 | 8-719-200-02 | (V701)...DIODE 10E2 |
| SW1 | 1-570-666-11 | SWITCH, LEAF |
| SW2 | 1-571-560-11 | SWITCH, PUSH (1 KEY) |
| SW3 | 1-571-560-11 | (V701)...SWITCH, PUSH (1 KEY) |
| T901 | ▲1-449-291-11 | (V701)...TRANSFORMER, POWER |

ACCESSORY & PACKING MATERIAL

| | |
|---------------|---|
| 3-750-347-11 | (V701)...MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) |
| 3-750-347-41 | (V701)...MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) |
| 3-701-806-00 | ADAPTOR, 45 |
| 4-895-478-01 | INNER PLATE |
| *4-896-515-01 | (V701)...INDIVIDUAL CARTON |